

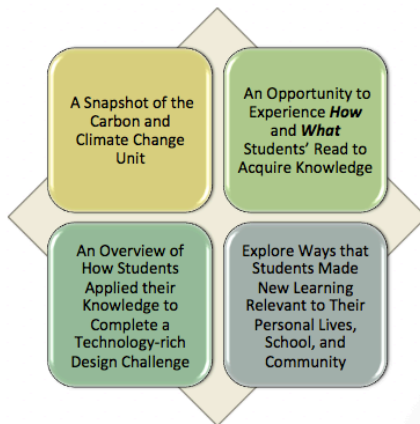
Integrating Science, Literacy, Technology, and Math: A Carbon and Climate Change Unit for Middle School Students

<https://sites.google.com/site/kretschmar2011cra/>

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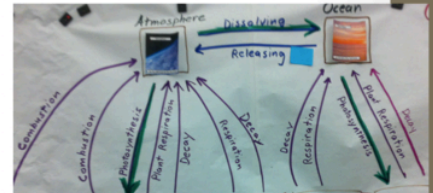
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4 Parts to Today's Session

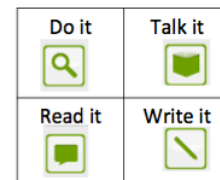


Design Principles (Part 1)

- Literacy in Science involves the interpretation of visual models and data



- Concept development occurs through reading, writing, talking, and doing science



Design Principles (Part 2)

- Provide students a clear purpose for reading
 - Create a need to carefully attend to the text to gather *evidence*
- Encourage Active Reading
 - Being active means making connections, thinking critically, and working to comprehend science ideas
- Provide time for sharing ideas
 - Each reader attends to different ideas.
 - Sharing these ideas leads to a more comprehensive understanding of the text.



Design Principles (Part 3)

- Provide students opportunities to...
 - Extend their thinking by generating a new idea or design
 - Conduct research to collect evidence or learn more
 - Share their knowledge with others through writing and presentation
 - Use technology in purposeful ways that promote creative thinking



Useful Resources:

- Google Sites** (<http://www.google.com/sites/overview.html>) -- a great resource for building websites collaboratively (and designing an assignment specific repository).
- Google Customized Search for Educators** (http://www.google.com/educators/p_cse.html) -- create a personalized search engine that searches only across sites that you specify and displays results that you know will be right for you or your students.
- GlogsterEDU** (<http://glogsteredu.edu.glogster.com/>) - a user-friendly easy to use resource for creating online posters that are dynamic, interactive, and multimodal. Incorporate text, video, audio, and images.