

Cris DeWolf

I have taught at Chippewa Hills High School, in the middle of Michigan's lower peninsula, for the past 17 years. I currently teach Biology, AP Biology, and a series of "Topics in Earth & Space Science" elective courses that include Astronomy, Geology, Weather & Climate, and Water on Earth.

I am active in our state Earth science teachers association, MESTA, having served as president, and now serving as the editor of The Michigan Earth Scientist. A relevant recent project I was involved in was one of the pilot LIT groups of the AMS's new addition to the Datastreme Project – Earth's Climate System.



The picture shown here is from a recent trip into the old gypsum mines under Grand Rapids, MI that I recently went on with my family. Formations like this, and the salt that is mined beneath Detroit, show that climate in our region has definitely changed in the past!

I am looking forward to getting my group recruited and working together with all of you. For more information about joining our group here in mid-Michigan, check out my wiki at <http://mm-lhsce.wikispaces.com/>

Here's a really great music video on climate change from the Polar-Palooza website: <http://passporttoknowledge.com/polar-palooza/whatyoucando/taacc/>

Recruitment

Status as of 12/7.2010

I have created a wiki site for our PLC. A link to a Google docs form for registering to join our PLC is included. So far one teacher has registered using the form. One more has become a member of the wiki, but needs to be directed to the form.

I attended David Bydlowski's session at the Metro Detroit Science Teachers Association conference last month and received e-mail addresses from 3 teachers who want to join. I have e-mailed them with an invitation and the URL for the wiki but have only heard back from one of them.

I will attempt (again) to recruit from within our ISD and plan on starting with our first meeting on or near January 12th, 2011.

Here are my current participants. linked to their pages on our wiki. I lost 2 since our last Leaders Mtg. One was already in Dave Bydlowski's PLC, and I don't know (yet) why a teacher from a neighboring district dropped out.

- 1 [Cara Noyes](#)
- 2 [Christine Webster](#)
- 3 [Eric Engel](#)
- 4 [Ernie Delemeester](#)
- 5 [Kate Kennedy](#)
- 6 [Laura Forbes](#)
- 7 [Lenny Starck](#)
- 8 [Lise LeTellier](#)
- 9 [Melissa Bednard](#)
- 10 [Shawn McNamara](#)

Resources

Climate Change Education Resources

Activities for Conceptualizing Climate and Climate Change
<http://climate.agry.purdue.edu/climate/ccc/>

This site includes 4 teaching modules (Ecological Impacts, Greenhouse Gases, Extreme Weather, Natural Processes). Each module contains 4 lessons. Each lesson includes a teachers guide, activity, and powerpoint.

Earth Exploration Toolbook

<http://serc.carleton.edu/eet/chapters.html>

This site offers a series of lessons that incorporate a variety of software tools that allow the user to work with real data. Periodic workshops, delivered remotely via telephone and website, are also offered, to train teachers in the use of the lessons.

Lessons include 9 that involve climate and climate change topics.
**I have participated in these, and they are very good.

Reflections

10.12.2010 – It was good to see that so many people are still where I am – with more recruiting work to be done. Going through the example forms was useful, yet I still need to see why the link on my wiki takes me to the spreadsheet and not to the form. This needs to be fixed before I publicize further.

12/7/2010 – The problem mentioned above is no longer an issue.

Textbooks

... that include Climate Change

Here at Chippewa Hills High School, we have 2 courses in the science curriculum that include climate change. They are: Earth Systems Science (9th grade) and Weather & Climate (Grades 10–12).

Textbooks in use are from Prentice Hall (Pearson).

Weather and Climate – The Atmosphere: An Introduction to Meteorology (8th Edition) Tarbuck/Lutgens
ESS – Tarbuck/Lutgens, Earth Science, 9e

Our PLC Meetings

January 17th

*I will look for the file I sent Alan and add it here as an attachment.

February 21st

Scheduled Meeting canceled. I was unable to make it home in time due to a snowstorm. Meeting rescheduled for February 28th.

February 28th

For this meeting I had my PLC members register for an EET workshop –

Investigating Climate Change Using Observed Temperature Data

<http://serc.carleton.edu/eet/g sod/index.html>

I will be posting some follow up questions on our wiki page for PLC members to discuss their thoughts on the workshop, and plans for classroom implementation.

Five of my PLC members attended this workshop with me. Four have participated in the follow-up discussion on the wiki. I need to encourage them to be more interactive with each other, comment on each other's posts, ask questions, etc. I also contacted the 2 teachers who had originally signed up with me but have never attended a meeting. One e-mailed me back, and stated that she can't find the time to do it justice. I have not heard from the other. I will be dropping them from my list later this week (3/8/11)

March 28th

Five PLC members attended tonight's meeting, held via ReadyTalk. We started at 7 PM and finished at about 8 PM (EDT). We started by sharing some of the work done by a member who could not attend tonight, and the resources she has posted on our wiki. I shared one site in particular, www.realclimate.org and we discussed Lise's method of presenting the facts of climate change to her students and guiding them to formulating their own opinions on the topic.

We then moved on to the NASA Explorer School website, I logged on to my participant's page and shared some of their climate related resources and promoted the program.

Next, we looked at the CLEAN pathways website, and looked at their featured resource from Teachers Domain. One of our members has used Teachers Domain and shared with us what she has used and how it worked with her students.

Next month we will be doing a lesson together that I developed based on the EET Chapter "Whither Sea Ice" that uses Image J. I showed them where to download this software and showed them how it can be used to measure areas on an image of the extent of sea ice in the Arctic.

Had a few minor tech glitches on my end, but PLC members carried the ball and discussed what they have been or plan on doing with their students on climate change.

April 18th

Five members attended (Laura, Shawn, Chuck, Melissa, Christine)
We started with a round table, with everyone sharing what they have done relating to climate change in their classrooms since the last meeting. Much was discussed, including the GLOBE Project Budburst, NCAR climate resources and classes, one teacher is going to try an inquiry activity that another teacher shared on our wiki – tomorrow. One teacher wants more activities that use past, present, and future data.

Next, I led the group through a lesson I designed called "Polar Bears in Peril – Evidence for Climate Change?", which was my classroom implementation plan for "Whither Sea Ice?" – an EET chapter workshop I attended several years ago. This went well, and was appreciated by the attendees. Several had computer issues that kept them from following along. One could not access Ready Talk and only had audio....

Next we discussed Climate Change unit outlines to be posted on the Leader's Site, and upcoming surveys.

I had them go to my Google Docs form for a follow up survey to their impressions thus far on PLCs in general, and this one in particular, so I can see what trends (if any) are present and wrap up my action research project on the effectiveness of PLCs.

May 9th

Two members attended (Lise and Susan Tate) 3 members let me know they would not be able to attend.

Attendance was low. I need to begin requesting an RSVP. It does get busy at the end of the school year. We had a set agenda, delivered in advance. Participants had to go to the wiki and download some files that would be used in the meeting ahead of time.

We did introductions, as we had one new member attend. The format was a bit more relaxed than normal, so we had plenty of time to chat about what we do at our respective schools. After introductions, we looked at climate resources at GLOBE and discussed the opportunity to pilot some of their new activities.

We spent the rest of our time looking at the Greenhouse Effect applet at PHET, discussing how it worked and how it could be used in the classroom.

It was decided that we would NOT meet in June, but that everyone would be responsible for posting to a discussion I have yet to set up at the wiki. Participants were encouraged to post reactions to the meeting on the wiki at the end of the meeting – which they did. One of the findings of my research on PLCs thus far has been that some of the teachers would really like to see more

interaction between the participants – outside of the PLC mtgs. So, that will be a focus of future efforts.