

## Minutes of 9<sup>th</sup> grade collaborative, Hermon High School, 11/20/08

Present: Pat Buchanan (Hermon), Marc O'Clair (Hampden), Mike Morton (Brewer), Jeff Owen (Orono), Ed Lindsey (Old Town)

We jumped right into a discussion of *systems* aspects of the atmosphere and atmospheric circulation.

- What are the boundaries?
- What are the parts?
- What are the inputs & outputs?
- What is conserved within the system?
- What are the subsystems?
- Does output from one subsystem become input for another?
- What are some emergent properties of the system that the parts themselves don't have?

We pondered:

- what citizen-level understanding is
- what conceptions students already have
- what good engaged learning in the 9<sup>th</sup> grade might look like (one test: Is it memorable?)
- what physical science would need to be taught on an as-needed basis
- how the ocean might be included
- whether atmospheric, then oceanic, then lithospheric circulation might best be taught one after the other since they all derive from the same density-driven up and down forces, and offer an opportunity to showcase very different time scales

We reminded ourselves of who 9<sup>th</sup> graders are.

We taught ourselves some Earth science.

We shared some ideas for labs/activities/demos that work or could work.

One participant sought good pedagogy on how to turn demos into learning experiences. He knows there must be ideas.

Pat took us on a tour of Hermon's teaching, technological, and library facilities, and good discussion ensued.

We thought it would be a good idea to have an informational page go up on the PREP website. This is in response to a suggestion by Owen Maurais.

For next time:

- Debrief on any teaching of atmospheric circulation any one might have had a chance to try.
- Do a Curriculum Topic Study (CTS) on oceans using the National documents.
- Discuss the learning from the CTS and define what 9<sup>th</sup> grade learning might look like.
- Outline approaches and strategies that people can walk away with.
- Determine next school site for an evening meeting.