

9th grade science collaborative work, Reeds Brook Middle School, 12/5
(By Ed Lindsey)

Present were Ben Ewing (Bucksport), Beth Paradis (Nokomis), Mike Morton (Brewer), Danielle Johnson, Marc O'Clair, Brad Veitch (Hampden), Jeff Owen (Orono), Ed Lindsey (Old Town).

At the previous session (Hermon HS), we worked on how the big ideas of systems and cycles could be addressed through a study of atmospheric circulation. At today's session, we took time to debrief what's been going on in our classrooms. Students have been working on ideas including differential heating of Earth, atmospheric circulation, astronomy and the solar system, atomic structure & light emission, structure of matter, and motion.

We welcomed Brad Veitch from Hampden Academy.

We did a Curriculum Topic Study (CTS) on Oceans. The purpose of a CTS is to reveal what recommended science learning looks like using the documents that embody the National Science Standards. The National documents were pointedly short on facts specific to oceans and long on the essential concepts a person needs in order to make sense of why the oceans do what they do. Although there are important things to know about the oceans, for 9th graders oceans probably ought not to be a *topic* so much as an opportunity to add to the students' web of big ideas that will help them understand not only oceans, but also science content in courses that follow, and an opportunity to gain a more sophisticated appreciation for the planet they inhabit. Some of the big ideas that kept coming up in understanding oceans were *scale, interacting systems, the conservation of matter, gravity, and density differences*. There were important instructional cautions.

(Using this day's work, Jeff and I conceived a piece that goes into some detail and which we hope helps people use oceans in the 9th grade. It will be a separate document and will be along.)

We set the next work session. Mike Morton invited us to **Brewer High School Monday, January 12, 4:30 to 8:00**. Mike will arrange for something for us to eat. Thanks Mike. (Let us know if you need any assistance.) Please bring a bit of cash to help defray Mike's expenses.

In plenary, we did not outline the work for our next session. Marc suggested it would be useful to bridge the gap from atmosphere to weather. Please get in touch with what would be targeted to your needs and I will send out a proposed agenda.