



# Voices from the Community

## Transferring the Polar Research Experience

Volume 1 Number 2

### Polar Study Group by Ethan Forbes

I teach fifth grade at the Butterfield School in Orange, MA. For the past two years I have been working closely with five teachers in the Orange elementary system. I feel

fortunate to be team teaching with Ann Murray in an inclusion setting. Also involved is a sixth grade inclusion room lead by teachers Courtney Neal and Johnna Hebert. There are two additional teachers in my mentoring group from other schools, Jake Strunjo teaches third grade at Dexter Park and Kelli Gervais teaches second grade at Fisher Hill School.



Students working on Archeological Excavation at Butterfield School

One incentive in our system that supports our work is the availability of professional development points and extra pay for working these additional hours. Our work will also assist us in becoming re-certified as professional educators, a requirement in Massachusetts. It definitely helps to have positive and supportive administrators like our superintendent and our principal, Robbie Haigh. This summer my mentoring team worked for three full days to plan projects for the school year as well as to assess, modify, add, and in some cases delete certain work. We developed a polar study unit and have been working on a combination of Arctic and Antarctic projects throughout the year. The culmination will be a show that travels to the three schools in the spring. One

## Reminders

- The TEA Transfer Workshop will be held at the American Museum of Natural History July 7 -13!
- All TEAs are reminded to credit NSF when talking to the press and making presentations about their polar research experiences.
- TEAbooth at NSTA is #1658.
- New MRG groups start in March and April.

## TEA Updates

- Michael Lampert has been awarded a \$10K Toyota Tapestry Grant to support his mentoring group's efforts to bring research experiences to classrooms.
- TEAs and Researchers co- Author article! See -- Klene, A.E, Nelson, F.E, Nevins, J. Rogers, D., and Shiklomanov, Nikolay I. (2002). Permafrost and secondary education: direct involvement of teachers and students in field research. *Geomorphology*. Vol. 47, Issues 2-4, Oct. 2002, pp. 275-287

component of this unit is an author study. We selected Jean Craighead George because she is an accomplished writer who has written stories about the Arctic region for many age groups. Her books cover the native people, animals, survival, weather, and how they all come together in individuals' lives. Because our group represents the 2nd, 3rd, 5th, and 6th grades, we decided to all read an age appropriate novel. All four classes will be working on projects, as well as studying the author. We contacted Ms. Craighead George and she has agreed to help answer the children's questions via email. The author study incorporates many areas of the curriculum and the Massachusetts frameworks in language arts, science, math, art, technology, and social studies. The projects resulting from this study will be included in the traveling exhibit along with projects that were worked on collaboratively, including an animal study, state of Alaska study, art projects, and an archaeological dig.

In addition to this curriculum work, my mentoring group is also working on a grant that we hope will bring a laptop computer and digital camera into each classroom. The three days of working together last summer (8 hours each day) helped a great deal. We have also been given permission to work together during professional development days. We try to meet once or twice a month. There is a time commitment to all of these projects but they all fit with the Massachusetts frameworks in social studies, language arts, math, and science. This has been a very satisfying experience so far. All of the teachers involved in the project plan to use our polar studies towards our re-certification. I hope we will be able to meet again next summer to work on our projects. I think it would be a lot more difficult to work towards these goals if we did not have this time. Our administration sees the positive outcome from our students. I am planning to take four of my students to Fairbanks, Alaska this March to present a research project on an oral history project at the Alaska Anthropology Conference.

## Antarctic Science & Language Arts Collaboration by Jan French

I teach at science at Cincinnati Country Day School in Ohio. Although my 2001/02 field experience in Antarctica was cut short due to a broken ankle, I have continued to collaborate with other teachers to disseminate Antarctic science to students. Students grades 3-5 come to the science lab for their instruction. and we use various inquiry-based learning activities to accomplish our learning objectives. I am the only science teacher for these grades and do not have opportunities to collaborate with other science teachers. However, I have worked collaboratively with 3rd grade teachers and 5th grade teachers to incorporate my Antarctic experience into their classrooms.

My most successful collaboration has been with the 5th grade language arts teacher, Barbara Marin. Barbara enjoys collaborating with others and she tries hard to incorporate what students are learning in other classes into her writing assignments. For the past three years, Barbara and I have worked together on a writing project that I use as a culminating project for my Antarctic unit. After researching various aspects of Antarctica on the Internet, the students are required to write a diary of their own imaginary expedition to Antarctica; information from their Internet research must be incorporated into the diary. The writing is done in both their language arts and science classes, which called for close collaboration between Barbara and me. We met everyday for 2 weeks until the project was completed. During our meetings we discussed the timetable for the project, progress of the students, and problems that we ran into in implementing our plans. The meetings provided us with time to discuss individual students who needed extra help and the content of the students' diaries. Barbara took this project a step further and also had the students write and perform a play about historical Antarctic expeditions. Through the Antarctic diary project students integrated technology, science, language arts, and performing arts into a cohesive unit. By writing the diaries, students were able to retain the information better. Doing this also made better use of class time because they could learn writing skills at the same time as they learned science concepts. My work with Barbara has been meaningful for me because I often feel isolated in school as the only science teacher. By working with Barbara, I have been able to gain insights into different teaching strategies, enjoy a working relationship with another teacher, and develop teaching skills in language arts. Barbara, too, enjoys the collaboration. It has helped her find a niche in her new 5th grade position. It has also helped her stay abreast of current science research. Barbara feels that the experience has broadened her focus as a teacher by involving her in the learning and teaching a subject she would not ordinarily be involved in.

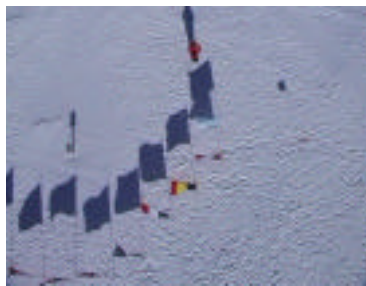


Barbara Marin working with Peter Bruns on his Antarctic writing project

### Web Notes

<http://tea.rice.edu>

- 2002 Annual Reports are posted in TEAs only area of the website.
- "Getting to the Core of Climate Change," a classroom activity developed by Mara Carey, Judy Filkins, Karina Leppik, and Rolf Tremblay, is posted in the activities area of the website.
- 2003/2004 Arctic Field Season Flyer will be available as a pdf download as of March 25.
- Check out Ethan Forbes' TEA frontpage to explore an oral history project on Wales, Ak conducted by students at the Butterfield Elementary School.



Antarctic Sun Photo Contest Winner! Ceremonial South Pole Photo by Eric Muhs

The next step for me in my TEA mentoring effort is to hold a workshop at the upcoming Science Council of Ohio. Scott McComb, another 2001 TEA, will join me along with Barbara and a TEA associate, Marcia Alexander, to hold this workshop. We will present an overview of the TEA program and Scott and I will briefly discuss our experiences. Then all of us will contribute to a presentation on integrating Antarctic science into the classroom. I think presenting this workshop will be a wonderful professional growth experience for all of us.

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