

Welcome to the PolarTREC Informational Webinar!



Teachers & Researchers
Exploring & Collaborating

www.polartrec.com



Welcome to HorizonWimba



Arctic Research Consortium of the United States

Slides will be shown here

If using VOIP, press here to talk

'Chat' with one person or the entire group

List of all participants

Raise your hand to ask a question

Return to the lobby or exit

The screenshot shows the HorizonWimba interface with several key elements circled in red: the 'TALK' button, the chat window containing messages from 'tina' and 'Janet_Warburton', the 'Main Room' dropdown menu, the 'People (3)' list showing 'Janet_Warburton', 'ronnie', and 'tina', and the 'Exit - Lobby - Help' menu. Arrows from the text labels on the right point to these circled elements.

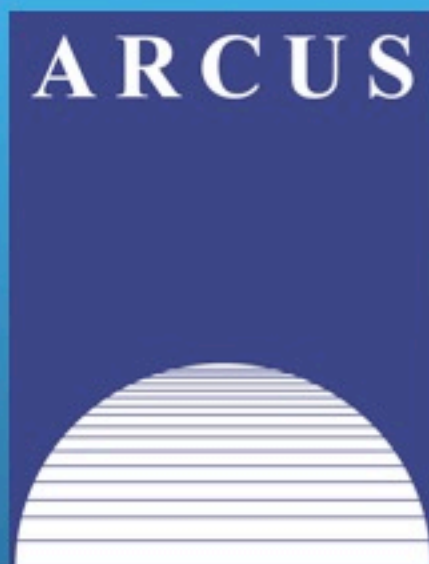
Please note: Today's event will be recorded and archived at www.polartrec.com.

Presentation Outline



- Introductions
- What is ARCUS?
- What is PolarTREC?
- Goals and Objectives
- The PolarTREC Experience
- How to Join PolarTREC
- Questions

What is ARCUS?



ARCUS (Arctic Research Consortium of the United States) is a non-profit corporation consisting of institutions operated for educational, professional, or scientific purposes. ARCUS provides leadership in advancing knowledge and understanding of the Polar Regions through a variety of programs and outreach endeavors.

ARCUS and PolarTREC

ARCUS was awarded funding from the National Science Foundation to manage PolarTREC, a three-year (2007-2009) International Polar Year (IPY) Education program.

What is PolarTREC?

PolarTREC (Teachers and Researchers Exploring and Collaborating)



PolarTREC is a professional development experience in which K-12 teachers are paired with researchers in authentic polar research.

From 2007-2009 over 40 teachers from around the United States will join scientists in the Arctic and Antarctic in celebration of the International Polar Year (IPY).

International Polar Year (IPY) 2007-2009



The International Polar Year (2007-2009) is an exciting scientific campaign focusing on the world's polar regions!

IPY is a time for discovery, science, learning, and awareness about the polar regions with activities for youth, scientists, and the public.

www.ipy.org

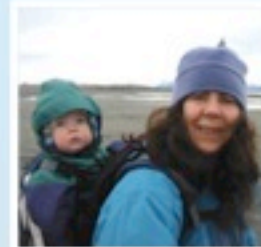
The PolarTREC Team



Wendy Warnick
PolarTREC PI
Executive Director



Helen Wiggins
Program Coordinator



Janet Warburton
PolarTREC
Project Manager



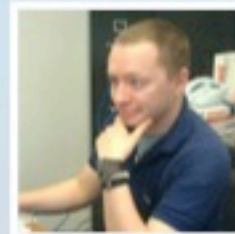
Kristin Timm
PolarTREC
Project Manager



Ronnie Owens
Web Developer



Ben Wade
Web Developer



Zeb Polly
Systems Administrator



Joed Polly
Video Production

...with help from the
entire staff at ARCUS



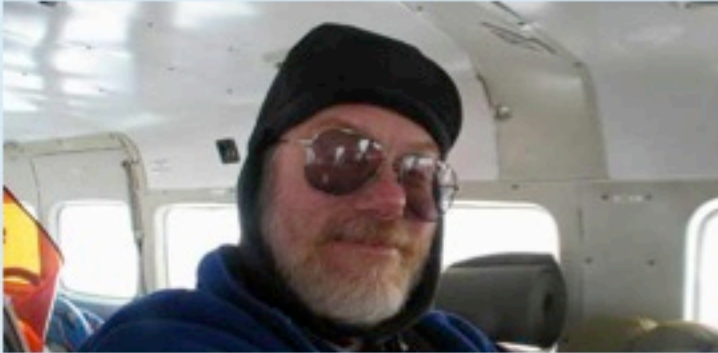
Goals of PolarTREC

The goal of PolarTREC is to invigorate polar science education by bringing K-12 educators and IPY researchers together through hands-on field experiences.

- ➔ **Improve teacher content knowledge** and instructional practices to bring polar science to the classroom
- ➔ To **increase public and student understanding** of and engagement in the polar regions, and encourage interest in science, technology, engineering, and mathematics (STEM)
- ➔ **Improve polar researchers' understanding** of and engagement in K-12 education to strengthen and enrich outreach and dissemination of their research
- ➔ To **develop networks of support** between polar researchers and teachers for ongoing collaboration and mutual learning

Elements of PolarTREC

Arctic or Antarctic
Field Research Experience



Professional Development



Sustained
Community & Support



Classroom & Public
Connections



Field Research Experience



- Teacher matched with researchers and travel to exotic locations in the polar regions
- Experiences last from 2 to 8 weeks
- Experience involves intense field work—teachers become members of team
- Experience involves safety and classroom training
- Teachers communicate daily with public

Field Research Experience

- PolarTREC 2007-2009
- Over 40 teachers (About 12/year)
- 8 Arctic/4 Antarctic Projects/Year
- Example Locations: Greenland, Alaska, Russia, Svalbard (Norway), McMurdo, Ship Based, Dry Valleys, and many more!
- Example Research topics: Remote sensing of ice sheets, tundra vegetation, archaeology, climate change, snow chemistry, oceanography, meteorology, ocean ecology, and many more!

Professional Development



- Teachers are immersed in scientific content and get experience with the latest scientific equipment
- Teachers and researchers work together to bring the science into the classroom—science that students can connect with
- Teachers utilize experiences to develop lessons that meet District requirements and National and/or State standards

Classroom & Public Connections



Outreach supported through the use of technology tools:

- *“Live from IPY” presentations*
- *Online journals*
- *Photo albums*
- *Podcasts*
- *“Ask the Teacher or Researcher” forums*

Connections also provide:

- Students with primary sources of information to work with
- Connections to researchers doing polar research in the here and now

Sustained Community & Support



Support mechanisms include:

- **Funding** to help the ongoing relationship between teacher and researcher
- **Teacher Partners;** where teachers are matched with another teacher
- The **CARE Network** - a discussion groups between teachers and researchers
- The **Learning Resources** database, an online collection of polar related lessons and activities
- The CARE and PolarEducation **List serves** to share ideas and opportunities

PolarTREC Application Timeline

2008

2009

2010

Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb



Teacher Applications
September '08



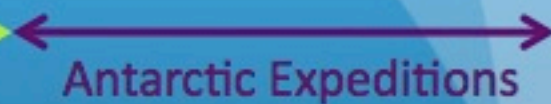
Teachers are matched to selected projects in close collaboration with the research team and selection committee.



Selected teachers travel to Fairbanks, AK for training



Arctic Expeditions



Antarctic Expeditions

Application Tips

- SPELL CHECK & PROOFREAD!!!
- Write thorough but concise answers
- Describe clear personal/professional goals and how this experience fits into/builds your career
- Outline clear visions of how this experience would benefit your classroom, students, community, teachers, public, etc.
- Provide examples when you can
- Read the question thoroughly, address all parts
- Do your homework, check out www.polartrec.com

Ways to get under our skin...

- Misspell PolarTREC, Arctic, or Antarctic!
- Talk about I, I, I or Me, Me, Me
- Paraphrase everything
- Be too brief or vague
- Incomplete applications

Why Join PolarTREC?



- Students make connections between science and the real world
- Students see that ordinary people can do science
- Students benefit by having a dialogue with between teachers and researchers
- Science and scientists become accessible!

Frequently Asked Questions

How long has the program been in existence?

What are the exact dates of the program?

Do you need to be a U.S. citizen to apply?

Can informal educators apply?

What are the costs associated for participants?

What research topics are planned or have previously been conducted? May I choose the location, dates, or research topic?



Frequently Asked Questions

How will my research preferences be taken into account if there are no projects relating to my interests? Will I be considered for another area of interest?

What are the specific physical restrictions for teachers to be qualified for acceptance if they are being considered for an expedition?

What are the qualities of an ideal teacher candidate for PolarTREC?

How are experiences in the field shared with students and a wider audience?

Aside from participation, what else is expected from a teacher before, during, and after the expedition?



Frequently Asked Questions

Will training be available for the technology that is required for teachers to interact from remote locations? Will equipment, such as satellite phones or digital cameras be provided?

How will teachers gain adequate knowledge of the research methods and equipment before the expedition so as to be actual contributors rather than spectators?

Is it possible to receive professional development credits for this experience?

Do teachers receive a stipend during participation??



Additional Questions?

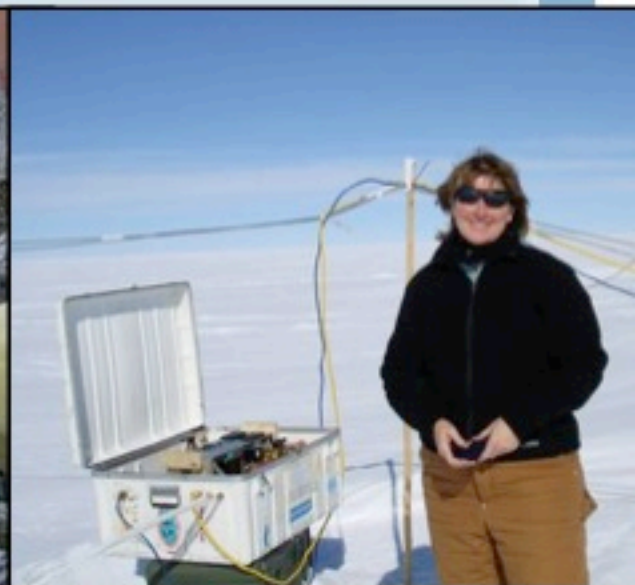
Please read the following documents available on our website: www.polartrec.com

- Frequently Asked Questions
 - Goals and Objectives
 - Teacher and Researcher Requirements
- ... and review the upcoming, current, and past teacher expedition journals on the website.

How Can YOU Join PolarTREC?

Follow an expedition! <http://www.polartrec.com>

- Read about adventures in science in the teacher journals
- Post questions to the “Ask the Team” forums
- Check out the beautiful photography in the Photo Gallery
- Listen to “mystery” sounds or download a podcast



How Can YOU Join PolarTREC?

Other things you can do...

- Contribute and utilize the online **Learning Resources**
- Become a member of **CARE network**



CARE

CONNECTING ARCTIC/ANTARCTIC RESEARCHERS & EDUCATORS

CARE is a professional development network that brings together teachers and researchers to discuss field experiences, current science issues, content, technology resources, and pedagogy.



Check out and register for upcoming events!



*Watch for upcoming events from the Antarctic at
www.polartrec.com!*

Thank You for Your Interest in PolarTREC!

Remember:

Teacher Applications are due **Monday, 29 September 2008**

Question or Concerns?
ARCUS 907-474-1600

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