



TEACHERS AND RESEARCHERS  
EXPLORING AND COLLABORATING

# **Welcome to PolarTREC Webinar :** **Meet and Greet**

*Program & Project Overview for 2013-2014*

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[www.polartrec.com](http://www.polartrec.com)

Slides will be shown here

Exit the presentation

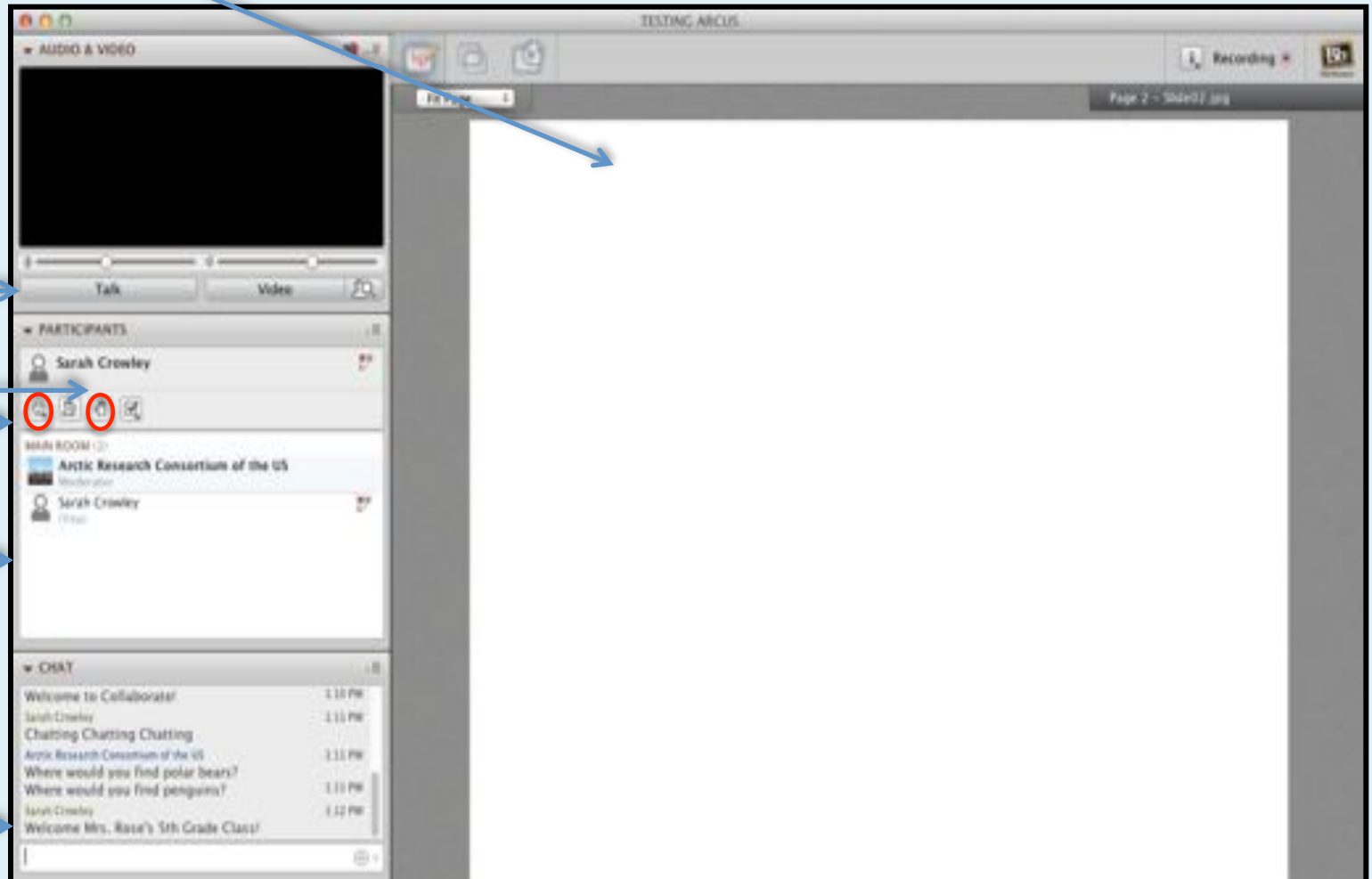
**Click** to Talk,  
**Unclick** to finish talking

Raise your hand to ask a question

Share with emoticons

List of all participants

Chat with one person or the entire group



## Please Note:

- Participants using the telephone can mute/unmute by **pressing \*6** on the phone.
- Today's event will be recorded and archived.



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# Agenda for Webinar

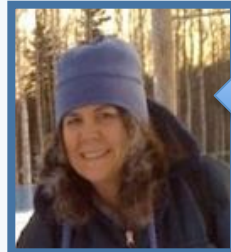
1. Overview of PolarTREC Program (5 min)
2. Program Requirements for Teachers & Researchers (10 min)
3. Program Evaluation (5 min)
4. Introduction to the 2013-2014 PolarTREC Projects, including Teacher and Researcher Introductions (35 min - 3 min/project)
5. Questions & Answers (5 min)



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# PolarTREC Overview

# Meet the PolarTREC Team



**Janet Warburton**

PolarTREC PI and  
Project Manager



**Sarah Crowley**

PolarTREC  
Project Manager



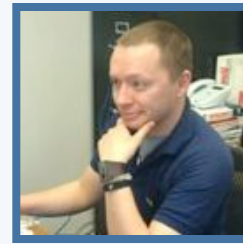
**Julie Griswold**

Orientation Asst.



**Ronnie Owens**

Web Developer



**Zeb Polly**

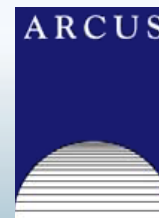
Systems Administrator



**Joed Polly**

Video Production

...with help from the  
entire staff at ARCUS



# Support and Funding



We are funded by the National Science Foundation Office of Polar Programs from April 2010-April 2013.



We are administered by the Arctic Research Consortium of the United States, a non-profit member consortium based in Fairbanks, Alaska. [www.arcus.org](http://www.arcus.org)



Arctic logistics support (including teacher travel, clothing, and equipment provided by CPS.)



Antarctic logistics support (including teacher travel, clothing, and equipment provided by Lockheed)  
Also you will here "US Antarctic Program (USAP)"

*...With other support and funding provided for specific projects on a situational basis.*



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# What is PolarTREC?

- PolarTREC is a professional development experience in which K-12 teachers are paired with researchers in authentic polar research experiences.
- From 2007-2009, over 50 teachers from around the United States joined scientists in the Arctic and Antarctic in celebration of the International Polar Year (IPY)
- ARCUS was awarded funding from the National Science Foundation to continue PolarTREC for another 4 years (April 2010-April 2013).
- Based on other Teacher Research Experience (TRE) Programs and prior ARCUS education programs, PolarTREC is a model program for Teacher Research Experiences.

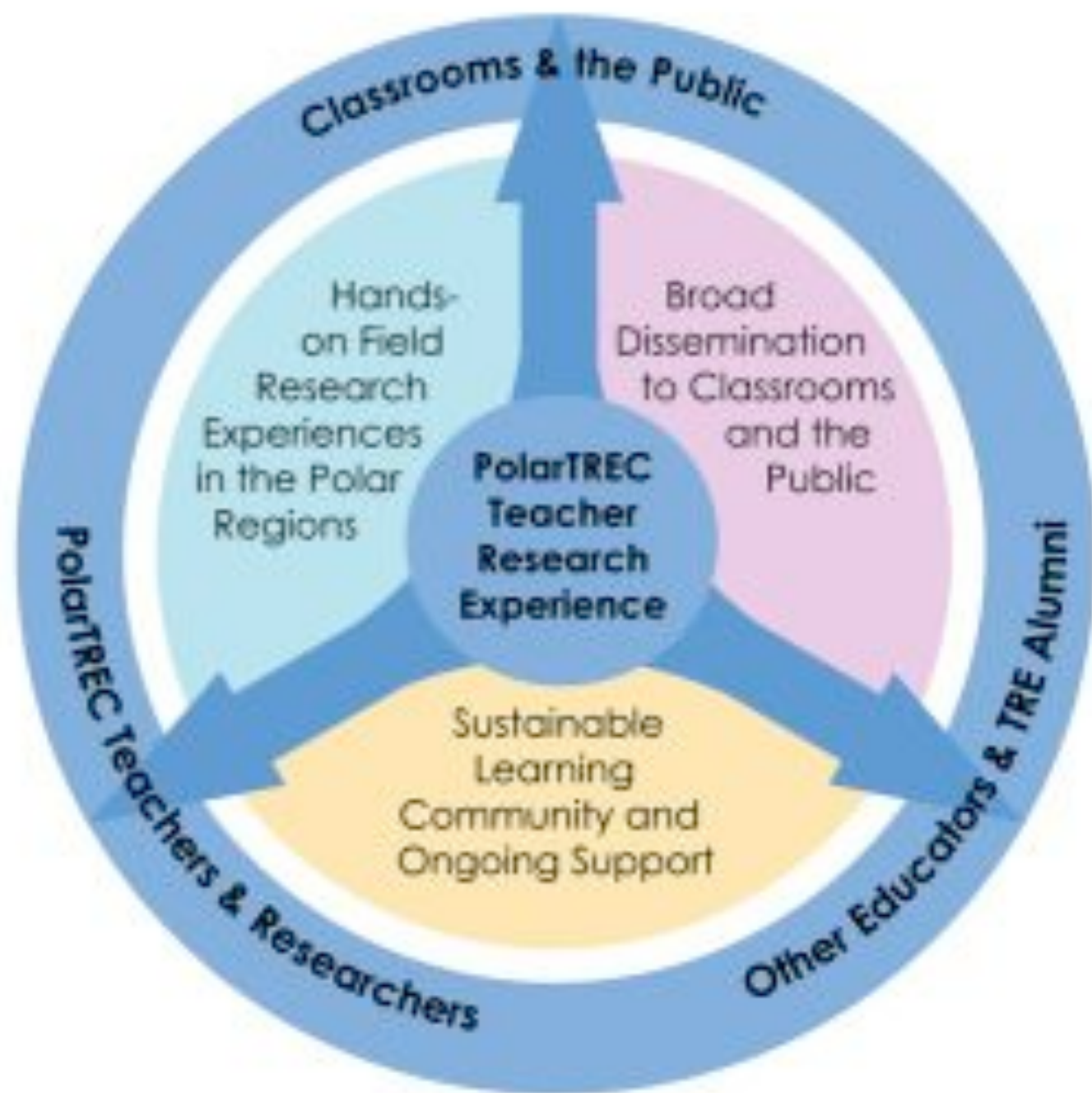


# Goals of PolarTREC

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

- ➔ **Improve teacher content knowledge and instructional practices** to bring polar science to the classroom
  
- ➔ **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
  
- ➔ To **increase public and student understanding** of and engagement in the polar regions, and encourage interest in science, technology, engineering, and mathematics (STEM)





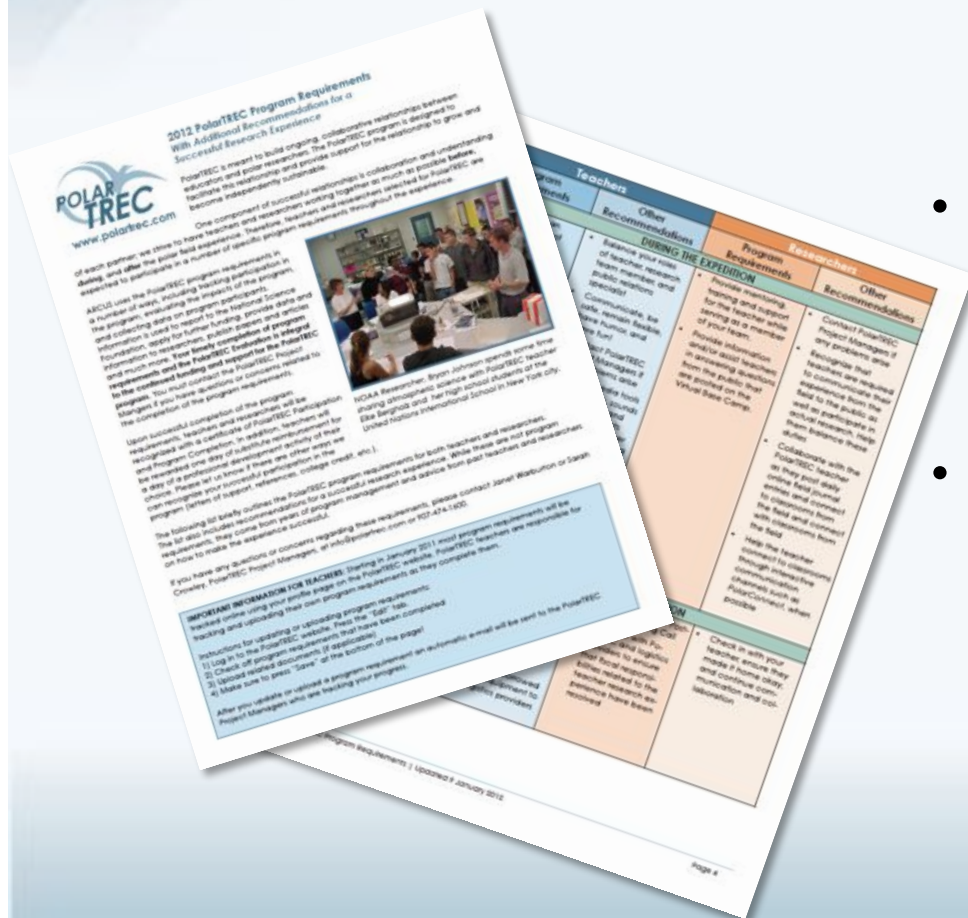


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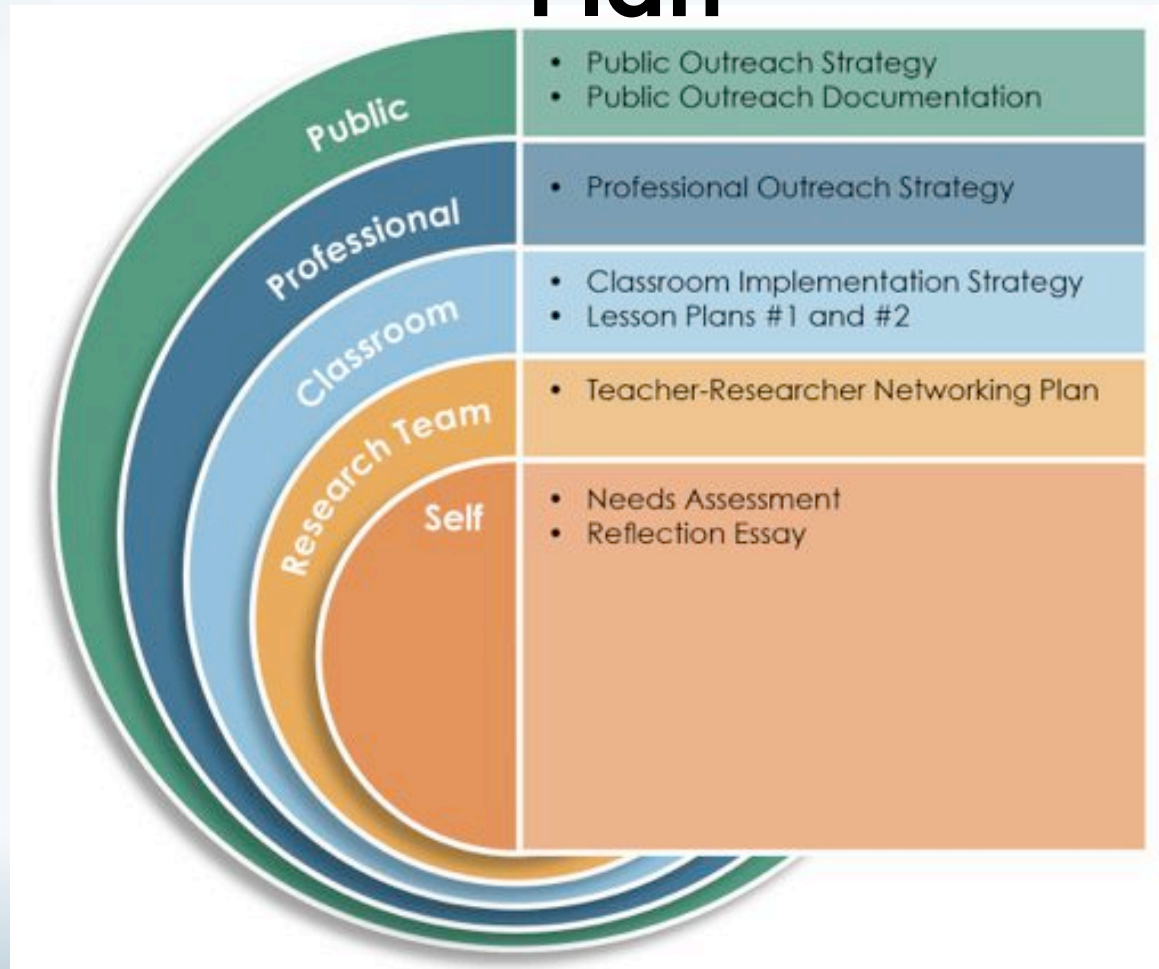
# PolarTREC Program Requirements

# Program Requirements

- There are detailed program requirements and recommendations for before, during, and after the expedition
- Teachers have many “deliverables”, but will need the support of and communication with the research teams to accomplish these goals
- Just like evaluation, important to our tracking, reporting, and continuation of the program



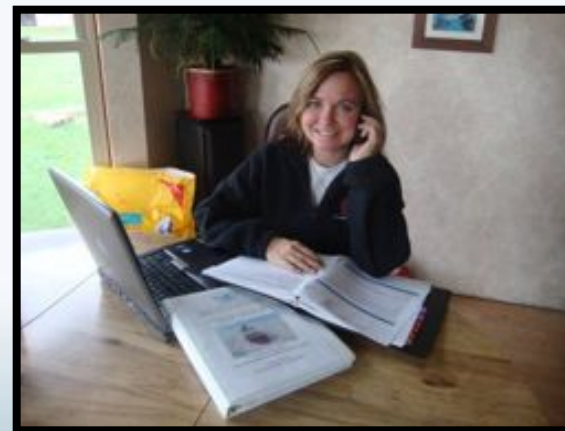
# Education and Outreach Plan





# Phone Calls and Webinars

- Important to make sure program activities are progressing
- Consists of a series of 4 webinars (web seminars)
- We encourage researcher participation for Webinar 1 and 4
- Consists of 2 phone calls, one pre-field call and one post field call which includes teacher, researchers, logistics providers, and PolarTREC staff





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# Phone Call and Webinar Timeline

1: Meet and Greet  
2: Advanced Logistics/Prep

3: Wrapping Up Your Season  
4: Season's End



# Program Evaluation

- We work with Angela Larson of Goldstream Group
- We need your help collecting data, please participate in the evaluation
- Teachers: Bring evaluation form to orientation.







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# Program Evaluation Timeline

2013												2014					
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun

Evaluation Forms Due & Teachers Take Pre-Test

Teachers Administer **Student** Pre-Survey & Complete Classroom Information Survey

Teachers Participate in Post-Survey and Interview  
Researchers take Post-Survey

Teachers Administer **Student** Post-Survey

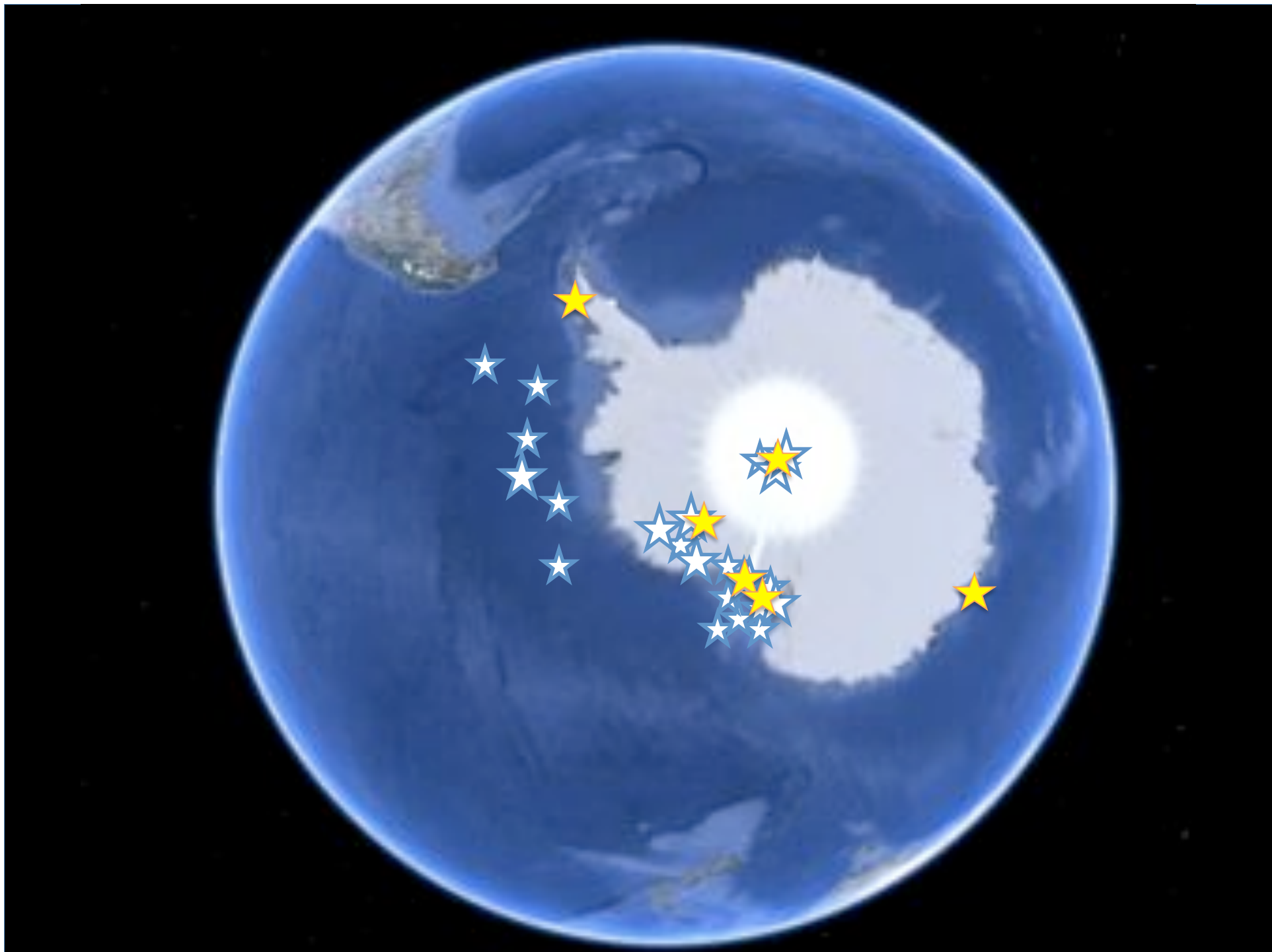
Timely Student Surveys are Crucial!!!



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# 2013-2014 Projects & Participants









## < 3-4 Minutes / Team

### Teacher Introduction (1 min)

Name, School, City, State

One thing they are looking forward to with PolarTREC



### Researcher TEAM Introduction (1 min)

Name, Institution, City State

Role in the Project



### Project Information (2 min)

Project Location

Primary goal of the research project



# Teachers Headed To the Arctic Part 1



**Mark Buesing**

Greenland with  
Michael Studinger  
and George Hale



**Nell Kemp**

Toolik, AK with  
Amanda Koltz



**Jamie Esler**

Iceland with Neil Iverson  
and Tom Hooyer



**Lynn Reed**

Einstein Fellow with  
JSEP program



**Alicia Gillean**

Toolik, AK with  
Cory Williams



**Tom Lane**

Healy, AK with  
Elizabeth Webb





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## Teachers Headed To the Arctic Part 2



**Carol Scott**

Finland with  
Kim Miller

**Ken Williams**

Denali, AK with  
Seth Campbell

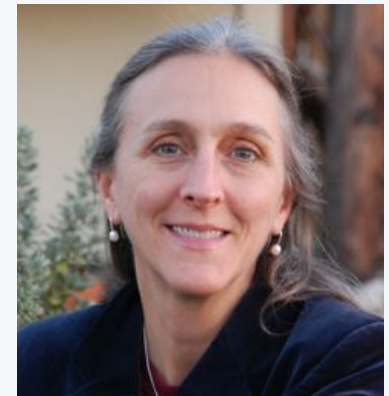


**Andrea Skloss**

USCGC Healy  
(Chukchi Sea) with  
Ken Dunton

**Jill Smith**

Kaktovik, AK with  
Ken Dunton



**Bruce Taterka**

Toolik, AK with  
Rose Cory



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## Teachers Headed To Antarctica



**Yamini Bala**

WAIS Divide with  
Erin Pettit and  
Rachel Obbard



**Glenn Clark**

R/V Gould  
(Sabrina Coast) with  
Amy Leventer



**Paula Dell**

R/V Gould  
(Palmer Station) with  
Kristin O'Brien



**Obed Fulcar**

South Pole Station  
With Jim Madsen



**Justin  
Kendhammer**

Dry Valleys with  
Egbert Schwartz



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# Closing Thoughts & Next Steps

# How to Succeed

## **Communicate**

Expectations, instruction, outreach plans, problems/praise to ARCUS

## **Be Flexible – roll with whatever comes**

Plans change moment to moment, be prepared

## **Research comes first**

Be an excellent research assistant, be a sponge, not all field work is sexy!

## **Make sacrifices to meet goals**

Sleep, fun, comfort, status/authority

## **Bring your unique skills to the team**

Readiness to lend a hand, humor, special skill/strength, positive attitude

## NSF Hopes for PolarTREC

- Support the integration of research and education
- Convey research experience to K-12 classrooms
- Develop inquiry-based activities for students (e.g., translate polar to place-based)
- Share with PIs the experience of K-12 educators, develop long-term relationships
- Professional development
- Improve outreach, education, broader impacts

# Travel Support

- We have a limited amount of funding to support pre or post field collaborations between teachers and researchers
- Please consider:
  - Pre/Post Field Visit to Lab or Researcher's Inst.
  - Pre/Post Field Visit to School or Classroom
  - Pre/Post Field Data Workshop or Preparatory Meeting
  - Pre/Post Field Conference Presentation





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**Questions?**





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# Thank You for Participating in PolarTREC!

**For Questions & More Information:**

**Janet Warburton, PI, Project Manager**

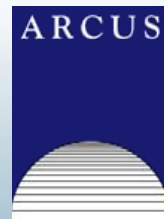
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