

## Polar-Related Activities at NSTA 2014

### Polar Presentations

#### **A Virtual Field Trip Connects Classrooms to the Wonder of Antarctic Penguins**

Thursday, April 3 8:00–9:00 AM

Boston Convention & Exhibition Center, 211

Explore new learning as you take your classroom on a virtual field trip to Antarctica. Watch life as it unfolds in an Adélie Penguin breeding colony. Presenter(s): Dena Rosenberger (El Capitan High School: Lakeside, CA); Jean Pennycook (Central Valley Science Project: Fresno, CA)

FORMAT: Workshop

SUBJECT: General Science

GRADE LEVEL: Elementary-Middle Level

#### **Teachers on the Tundra: Working and Collaborating with Scientists at Toolik Field Station**

Thursday, April 3 2:00–3:00 PM

The Westin Boston Waterfront, Webster

PolarTREC stands for Teachers and Researchers Exploring and Collaborating. PolarTREC teachers describe their experiences as members of science teams conducting Arctic research (ranging from spiders to squirrels to permafrost) and share related classroom resources/lessons.

Presenter(s): [Alicia M. Gillean](#) (Jenks West Intermediate School: Jenks, OK); [Bruce Taterka](#) (West Morris Mendham High School: Mendham, NJ); [Nell Kemp](#) (Kenwood Academy: Chicago, IL) FORMAT: Presentation

SUBJECT: General Science

GRADE LEVEL: General

#### **Polar Educators International (PEI): A Network of Teacher Leaders in Polar Science**

Thursday, April 3 3:30–4 PM

The Westin Boston Waterfront, Burroughs

Professional networks of teachers and scientists catalyze the leaders and sustain their success. [Join the PEI network](#); excel in polar science and climate change education.

Presenter(s): [Sarah Bartholow](#) ([Arctic Research Consortium of the United States](#): Fairbanks, AK)

FORMAT: Presentation

SUBJECT: General Science

GRADE LEVEL: General

#### **Scientists in the Classroom**

Thursday, April 3 5:00–6:00 PM

Seaport Hotel, Lighthouse I

Join me for interactive instruction on developing a mentor program among local, polar, national, and international scientists—one on one with all students for an entire academic school year.

Presenter(s): [Jillian B. Worssam](#) (Sinagua Middle School: Flagstaff, AZ)

FORMAT: Presentation

SUBJECT: General Science

GRADE LEVEL: Middle Level-High School

## **Joint Science Education Project**

Thursday, April 3 5:00–6:00 PM

Seaport Hotel, Lighthouse I

Learn about a successful project ([JSEP](#)) that brings U.S., Danish, and Greenlandic students together to explore polar science.

Presenter(s): [Lynn Foshee Reed](#) (Einstein Fellow, National Science Foundation: Arlington, VA)

FORMAT: Presentation

SUBJECT: General Science

GRADE LEVEL: High School

## **AMNH Pathway Session: Analyzing and Interpreting Data Using Visualizations and Scientific Data Sets**

Friday, April 4 8:00–10:00 AM

Boston Convention & Exhibition Center, 208

This session engages in visualizations of GRACE scientific data on ice sheets in Greenland and Antarctica to explore how climate change is affecting these regions.

Presenter(s): Dave Randle (American Museum of Natural History: New York, NY); Jay Holmes (American Museum of Natural History: New York, NY)

FORMAT: Workshop

SUBJECT: Earth Science

GRADE LEVEL: Middle Level-High School

## **Polar Educators International Open Meeting**

Friday, April 4 3:00–5:00 PM

The Westin Boston Waterfront, Paine

This meeting is open to all—polar and non-polar. Learn what has been accomplished so far and how you can join [PEI](#) now!

FORMAT: Meeting

## **Climate Series II: Antarctic Team Showcases Ice Cores**

Saturday, April 5 9:00–11:00 AM

Boston Convention & Exhibition Center, 156C

How do scientists know what they know about climate? What clues are hidden in the ice? Meet a scientist and an engineer engaged in research at the WAIS Divide. Get up close and personal with an ancient ice core! Hands-on activities and a movie will bring this home to your classroom.

Presenter(s): Jay Johnson (University of Wisconsin: Madison, WI); Linda M. Morris (Dartmouth College: Hanover, NH); TJ Fudge (Dartmouth College: Hanover, NH)

FORMAT: Exhibitor Workshop

SUBJECT: Earth Science

GRADE LEVEL: Grades 6-12

EVENT SPONSOR: NOAA

## **Featured Presentation: The Art and Science of Chasing Ice**

Saturday, April 5 9:30–10:30 AM

Boston Convention & Exhibition Center, 210C

Photographer and author James Balog shares the latest photography and image sequences from the Extreme Ice Survey. His images provide the “smoking gun” of climate change, visual

evidence that audiences young and old can understand. His multimedia show provides a fascinating exploration of humanity's relationship with nature, and a profound understanding of how climate change is affecting our planet. It is nothing short of a call to arms to one of the greatest challenges of our generation. James will also be discussing his new educational initiatives to support middle school science teachers and curriculum.

Presenter(s): James Balog (Founder and Director, Extreme Ice Survey and Earth Vision Trust: Boulder, CO)

FORMAT: Featured Speaker

SUBJECT: Environmental Science

GRADE LEVEL: General

### **Bringing Science into the Classroom**

Sunday, April 6 8:00–9:00 AM

Boston Convention & Exhibition Center, 151B

A collaboration among teachers and scientists brings Arctic field experiences into the classroom, benefiting both teacher and students.

Presenter(s): Andrew Juhl (Lamont-Doherty Earth Observatory: Palisades, NY); John A. Karavias (Walt Whitman High School: Huntington Station, NY); Jonathan E. Nichols (Lamont-Doherty Earth Observatory: Palisades, NY); Fran Hess (STANYS: Laurens, NY)

FORMAT: Presentation

SUBJECT: Environmental Science

GRADE LEVEL: Middle Level-College

### **Informal Polar Meetings**

#### **Polar Educators International Meet-Up**

Friday, April 4 4:30pm Whiskey Priest Pub and Grill: 150 Northern Ave. Boston, MA

All educators are welcome for a informal social event to meet members of Polar Educators International and network with like-minded polar people.

#### **Polar Night at the Red Sox**

Saturday, April 5 7:10pm

Fenway Stadium

Polar teachers are buying their own tickets to attend a Red Sox game. Seats are in the bleachers and all arrangements and purchases are to be made by individuals. Contact Sarah Bartholow <[sbartholow@arcus.org](mailto:sbartholow@arcus.org)> for more information.

### **Other Relevant Presentations**

Here is a list of presentations by PolarTREC participants on non-polar-specific topics, as well as climate-related presentations of interest.

#### **Climate: A Fascinating Scientific Topic with Challenges and Opportunities for Science Educators**

Thursday, April 3 5:00–6:00 PM

Boston Convention & Exhibition Center, 252A

This session will discuss some key things we know about the climate system from observations

and basic principles, how scientists worldwide give periodic updates on their understanding of climate change in the Intergovernmental Panel on Climate Change (IPCC) report, and some of the challenges and opportunities for science educators in teaching about climate.

Presenter(s): Paul A. O'Gorman (Associate Professor of Atmospheric Science, Massachusetts Institute of Technology: Cambridge, MA)

FORMAT: Special Session

SUBJECT: Earth Science

GRADE LEVEL: General

### **Climate Series IV: Lunch with Climate Scientists and Educators—Bring Your Own Lunch!**

Saturday, April 5 12:00–1:00 PM

Boston Convention & Exhibition Center, 156C

What do you want to learn about climate change? Where to find high-quality education resources? How to address student misconceptions? What the latest research tells us? Join informal one-on-one discussions with scientists and educators about issues surrounding climate change. Come prepared with your questions!

Presenter(s): LuAnn Dahlman (NOAA: Mesa, AZ); Jay Johnson (University of Wisconsin: Madison, WI); Linda M. Morris (Dartmouth College: Hanover, NH); Bruce Moravchik (NOAA: Silver Spring, MD); Victoria Arthur (U.S. Forest Service: Washington, DC)

FORMAT: Exhibitor Workshop

SUBJECT: Earth Science

GRADE LEVEL: Grades 6-12

EVENT SPONSOR: NOAA

### **Teacher Researcher Day Session: Systems Thinking in the Context of Climate Literacy**

Saturday, April 5 12:30–1:00 PM

Seaport Hotel, Plaza Ballroom/Group 2

The complexities of Earth's climate can be understood through explicit teaching of system dynamics. Discussion centers on research that assists learners to think systematically.

Presenter(s): [Margaret A. Holzer](#) (Chatham High School: Chatham, NJ)

FORMAT: Presentation

SUBJECT: General Science

GRADE LEVEL: High School

### **Raindrops Keep Falling in My Gauge: School Partnerships with a Citizen Science Network to Increase Climate Literacy**

Thursday, April 3 5:00–6:00 PM

Boston Convention & Exhibition Center, 251

CoCoRaHS stands for Community Collaborative Rain, Hail & Snow Network. Join us as we present research on CoCoRaHS' K–12 program. Engage in hands-on exploration of the processes of measuring, reporting, and interpreting precipitation data.

Presenter(s): Kelly A. Riedinger (David Heil & Associates, Inc.: Portland, OR); [Tim Martin](#) (Greensboro Day School: Greensboro, NC); [Margaret A. Holzer](#)

FORMAT: Presentation

SUBJECT: Environmental Science

GRADE LEVEL: Elementary-High School