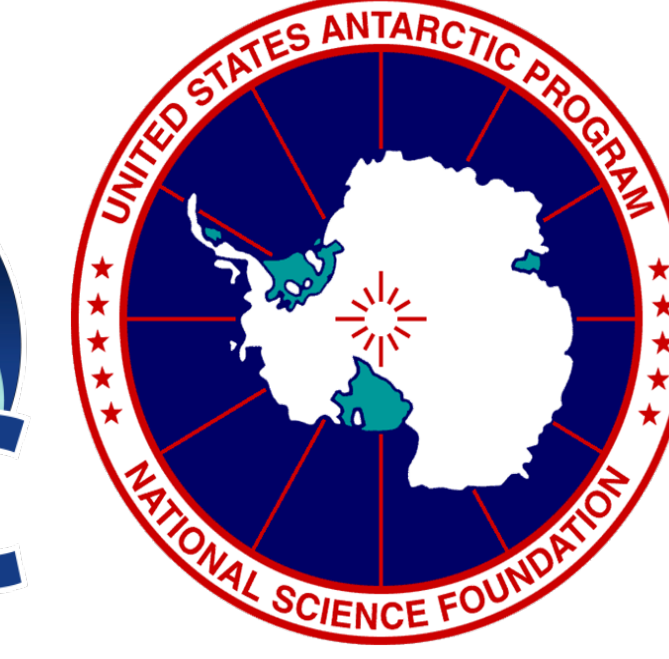


# Antarctic Meteorology Broader Impacts with Students

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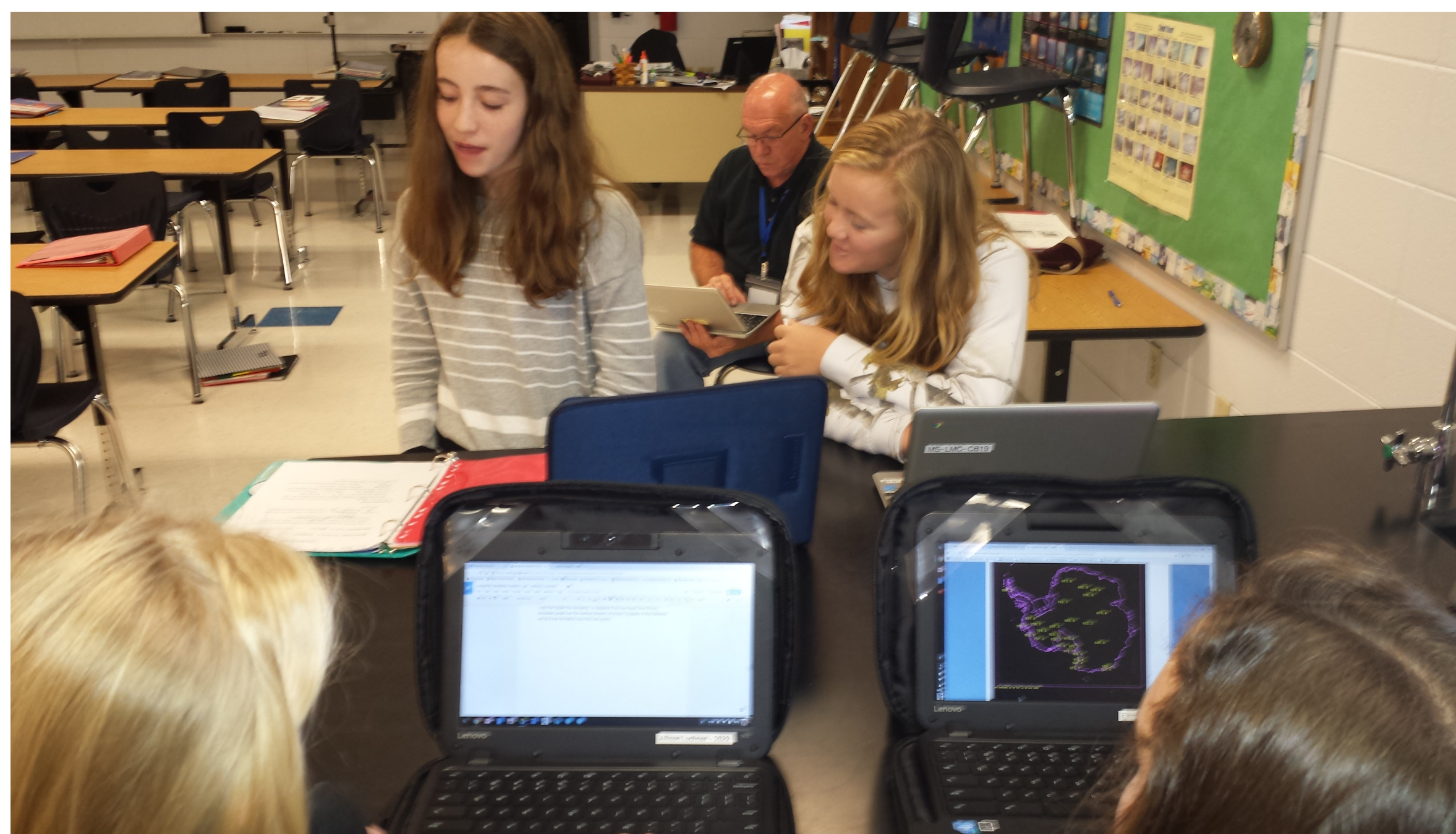
Thanks to NSF Office of Polar Programs Grant ANT-1535632

## Abstract:

A large focus of the Antarctic Cyberinfrastructure grant is to engage in outreach projects with a variety of schools all over the United States. Upon talking with a few teachers, plans were set to work with teachers in Wisconsin, Illinois, Iowa, and Massachusetts. The focus of these projects was to access, analyze, graph, etc., Antarctic meteorology data with a goal of teaching skills in data and analysis with the exciting Antarctic observational data rather than canned data. These presentations also provided background about the AMRC/AWS project and paths to a career in Science, Technology, Engineering, and/or Mathematics including Antarctic meteorology.

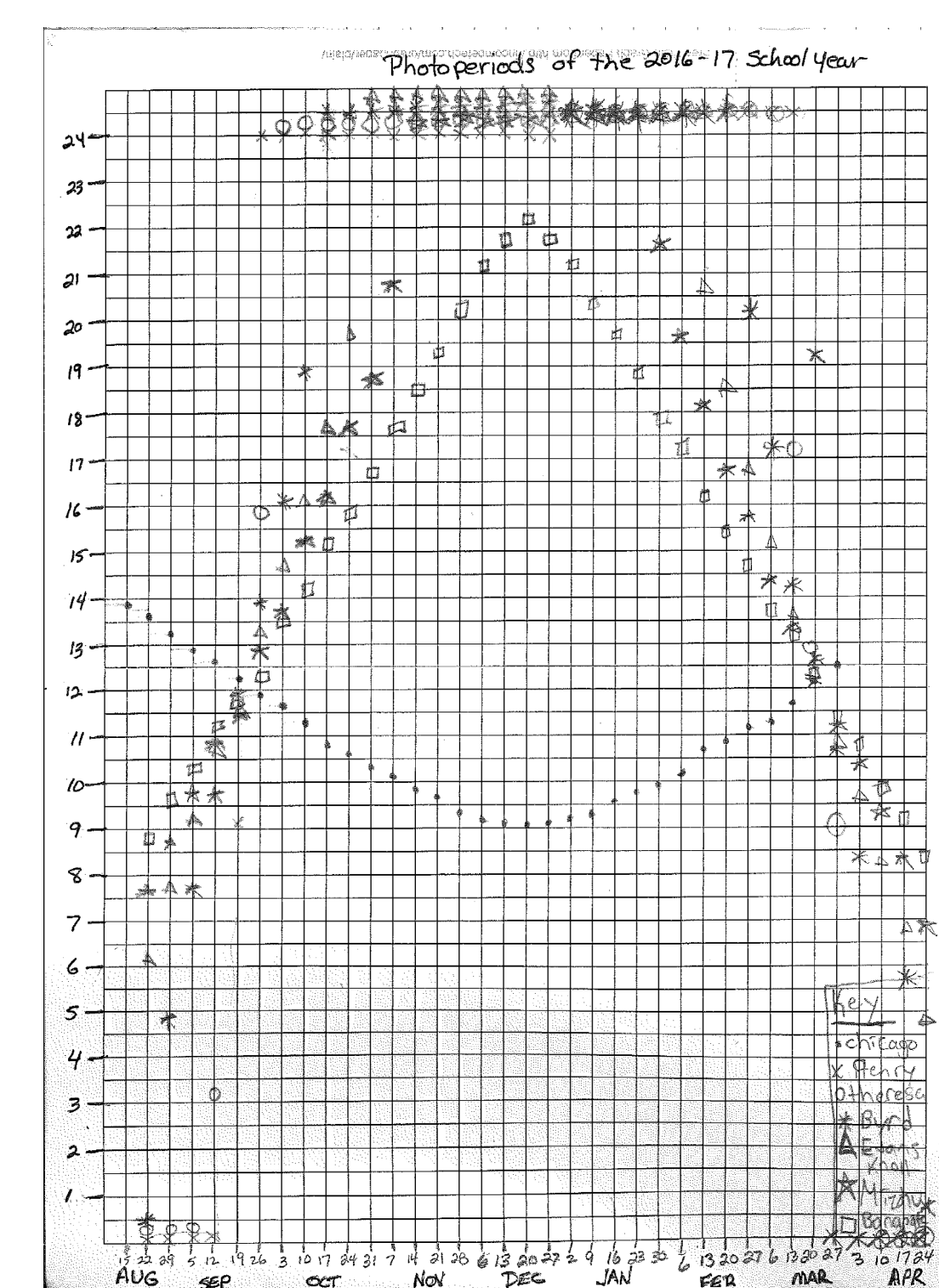
A lesson plan, developed for students to understand the relationship between station pressure and elevation, was used by a few of the teachers. The lesson plan used the topography of the US as an example for students to try and understand the topography of Antarctica by comparing station pressure values and their contours over the US and Antarctica. Another lesson plan was created by Jody Baty to show the photoperiod, the duration of daylight in a day, in Antarctica versus other regions of the world. An additional informal activity as a part of this effort was providing moral support for the collaborating teachers in their struggles in today's classroom. Finally, the outreach efforts were extended to the Madison community schools and science events.

## Lodi Area Middle School: Sara Hook



Students at Lodi Area Middle School working on a lesson plan on understanding the relationship between station pressure and elevation by using Antarctic Automatic Weather station data. Photo credit: Sara Hook

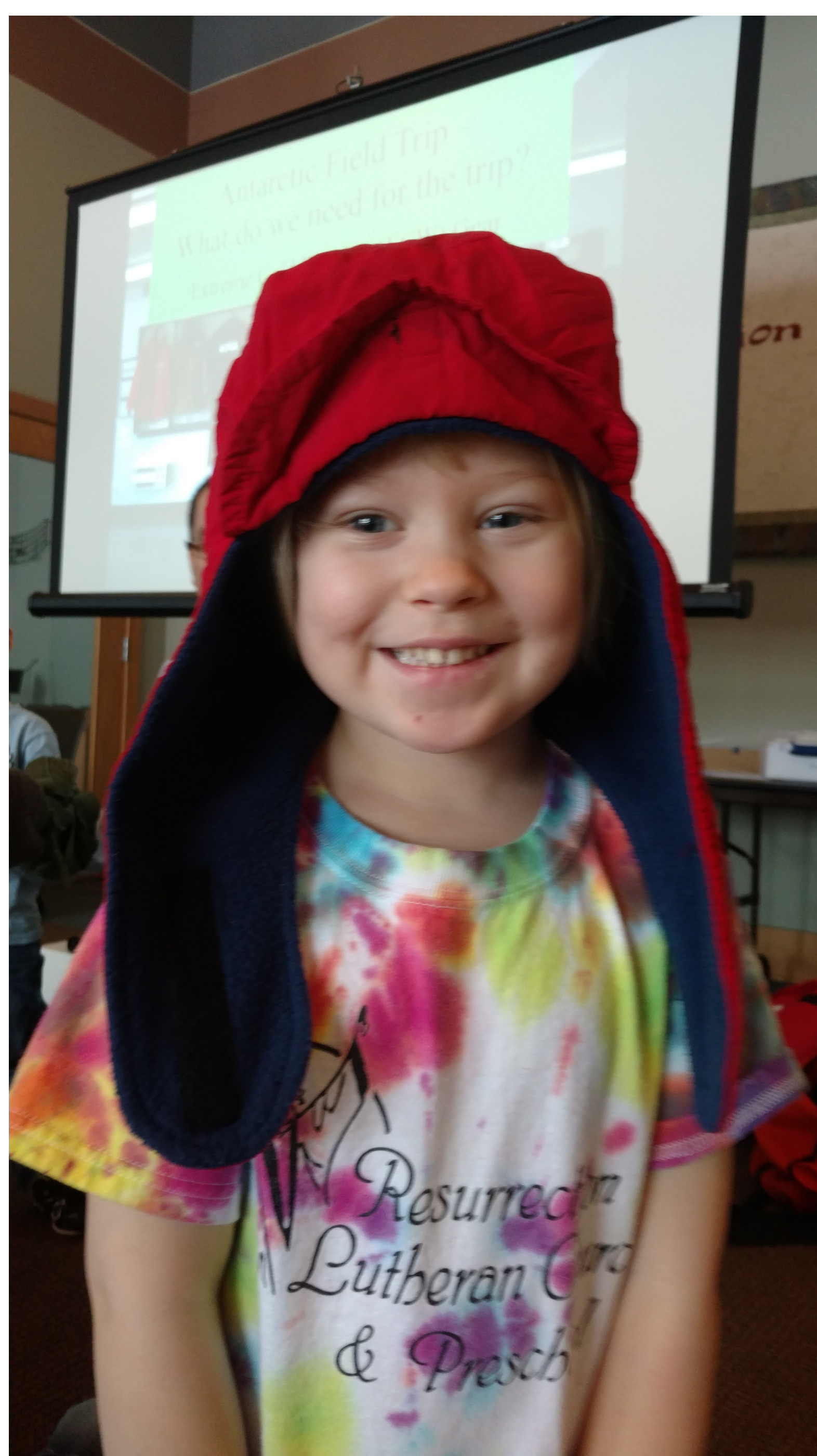
## Emerson Middle School: Jody Baty



Carol Costanza presented for all of the 6<sup>th</sup> grade students at Emerson Middle School in March of 2017. She explained her story about becoming a scientist, what it's like to live in Antarctica, and the types of data that the AMRC collects (top).

Jody Baty developed a lesson plan to understand how the photoperiod changes throughout the globe. Students compared the photoperiod of Henry AWS, Theresa AWS, Byrd AWS, Evans Knoll AWS, Mizuho AWS, and Bonaparte Point AWS to Chicago's photoperiod from August 2016 to April 2017 (left).

## Resurrection Lutheran Preschool



A preschool student at Resurrection Lutheran Preschool gets to experience wearing extreme cold weather gear similar to what researchers use in Antarctica. Photo credit: Ali Manning

## UW-Madison Science Explorations



Dr. Matthew Lazzara, Peter Voytovich, and Dave Mikolajczyk (from left to right) present information about the Antarctic Meteorological Research Center to UW-Madison Chancellor Rebecca Blank and her husband. Photo credit: Tim Schmidt

## Madison College Dark Skies



Dr. Matthew Lazzara talks with both UW-Madison and Madison College students about Antarctic meteorological research. The Dark Skies event offers an NWS Severe Weather Class, presentations, and information booths. Photo credit: Tom Fleming