IDP Education and Public Outreach

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# IDP Education and Public Outreach Program

1. **Professional Development for Educators**— in collaboration with scientists

2. **Public Outreach**— to museums and community organizations

3. **Development of Resources Based on Research Results**
   - Hands-on Labs for Classrooms
     - Virtual Field Labs

4. **Scientist Broader Impacts**
   - [https://icedrill.org/outreach-support](https://icedrill.org/outreach-support)
   - [louise.t.huffman@dartmouth.edu](mailto:louise.t.huffman@dartmouth.edu)
Professional Development K-12

National Science Teaching Association (NSTA)

DuPage Co. Professional Development Day
PEI (Polar Educators International)
ASSW (Arctic Science Summit Week)
NAAEE (North American Association of Environmental Education)

Golden Apple Foundation-Chicago

AGU-Geophysical Information For Teachers (GIFT)
School of Ice

Professional Development for Faculty at Minority Serving Institutions
June 18-23, 2023 Dartmouth, Hanover, NH

Types of Institutions

- **ANNH** 5.6% High School
- **AANAPISI** 2.4%
- **HBCU** 17.9%
- **Museum** 1.2%
- **MSI** 22.6%
- **HSI** 44.0%

**KEY**
- **AANAPISI** Asian American Native American Pacific Islander -Serving Institutions
- **ANNH** Native Hawaiian-Serving Institutions
- **HBCU** Historically Black Colleges & Universities
- **HSI** Hispanic Serving Institutions
- **MSI** Minority Serving Institution
- **TCU** Tribal Colleges and Universities
Public Outreach

Grad students helped at Montshire Science Museum, Vermont

Ted X Mile High Event—Partnered with NSF ICF

Public Event at Geology Museum at Rutgers

Winter Science Event at Science Museum of Orlando
Classroom Labs and Activities icedrill-education.org

1. Based on current science research
2. Use easily obtained materials
3. Aligned with Next Generation Science Standards (NGSS)
4. Entry level —can be used from middle school to college
5. Inquiry based/hands—on
Virtual Field Labs

3-Part Video Series Exploring Climate Questions featuring a Researcher

1. Intro/Question
2. Data Collection/analysis
3. So what? Relationship to future; words of hope
Virtual Field Labs (VFLs)
Icedrill-education.org

• Comparing Climate Change Past and Present-Dr. Carly Peltier and Jon Edwards
• Climate Warnings from Alaska-Dr. Dom Winski
• Climate Clues from the Past-Dr. Meredith Kelly
• Abrupt Climate Disruptions-Dr. Erich Osterberg

• Fall 2023: Sea Level Rise and Vital Signs from Thwaites-Drs Richard and Karen Alley
• Fall 2023: Do Burping Cows Really Matter? The Role of Methane in our Changing Climate—Ben Riddell-Young
• Fall 2024: Looking for Hope in an Ocean of Climate Change—Becky Alexander
• 2025?: Submarine groundwater discharge TBD—ASGARD (PI Doran)
• 2025?: Albedo TBD-Alden Adolph
Step 1: icedrill.org
Step 2: Contact Louise early in your proposal preparation

Broader Impacts

Discover IDP

OUTREACH SUPPORT

The Education and Outreach program of IDP fosters diversity through its well-established U.S. Ice Drilling Program for faculty at minority-serving institutions and provides hands-on discovery activities based on ice science to middle-school and secondary school teachers. IDP outreach efforts are advanced public literacy by humanizing the face of climate science by engaging community scientists in professional settings with educators through, for example, national conferences of the National Science Teacher Association.

Scientists who seek to include IDP education and outreach activities associated with U.S. Ice coring or drilling science projects should contact Louise Huffman at Louise.Huffman@Dartmouth.edu during their proposal preparation stage.
Scientists Play Key Role in all of our EO-Example from SOI 2019

<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
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<tbody>
<tr>
<td>Anderson, Bob</td>
<td>University of CO-Boulder</td>
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<tr>
<td>Clow, Gary</td>
<td>University of CO-Boulder</td>
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<tr>
<td>Hargreaves, Geoff</td>
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<td>UCAR</td>
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<td>Hood, Elaine</td>
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<td>Koenig, Lora</td>
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<td>MacFerrin, Mike</td>
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<td>Vaughn, Bruce</td>
<td>INSTAAR</td>
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<td>White, Jim</td>
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How can IDP-EO help with your Broader Impacts?

1. Help define the needs of the non-science audience you would like to reach
2. Suggest appropriate level of information
3. Give ideas for connecting with and engaging your audience
4. Help identify your data story question and present data in an accessible way
1. Work together to create presentations to non-science audiences
2. Present with IDP educators at webinars or Zoom to classrooms
3. Speak at AGU-EO sessions organized by IDP-EO
4. Speak together at national teacher conferences, public events, School of Ice
5. Design PD workshop or science events for local teachers
6. Together create hands-on labs related to your research
7. Bring an idea-create something new together
8. Virtual Field Lab based on your research
How can the IDP-EO help you meet your broader impacts?

QUESTIONS?