

Polar Educators International 2025 USA Workshop
Polar Bridges: Educator practice closing the gap between polar science, indigenous knowledge and polar education
(a wayfinder for the next International Polar Year - IPY2032-33)

March 22-24, 2025

as part of the Arctic Science Summit Week, Boulder, Colorado

ASSW Program: <https://assw.info/program/assw-2025-program>

Indigenous Pavilion Schedule: <https://assw.info/program/indigenous-pavilion>

** Note that times are in Mountain Daylight time*

Friday, 21 March 2025

Time	Event	Theme	Description	Location
2:00PM - 4:00PM	Registration		Pick up your badge and info banner. Look out for the PEI2025 banner.	At the Main Conference registration desk.
3:30 PM - 4:00 PM	PEI Tea/Coffee		ASSW scheduled coffee break and an informal opportunity to get together with PEI representatives and workshop participants.	UMC Coffee Venue
4:00 PM - 5:00 PM	Educator Meet & Greet		Informal briefing to meet with PEI workshop participants.	
6:30 PM - 8:00 PM	ASSW Icebreaker Reception		Open reception hosted by ASSW for all conference participants.	Venue TBD

Saturday, 22 March 2025

Time	Event	Theme	Description	Location
7:45 AM	Room Open			Glen Miller Ballroom in UMC - 210; Open Session - HYBRID
8:00 AM - 8:30 AM	Welcome (Sophie Weeks, PEI President)	Polar Education, ASSW, ICARPV & IPY (Swimming in the Sea of acronyms)	Welcome by PEI President Plan of the Day Housekeeping Items About PEI	Glen Miller Ballroom in UMC - 210; Open Session - HYBRID
8:30 AM - 9:00 AM	Theme Speaker: Dr. Haliehana (Hana) Stepetin (Unangaʻ) Presentation: Alaʻuʻu [Ocean] as Pedagogy	Theme: Place-based and Land-based Learning In and About the Arctic	Opening the theme with a presentation by Dr. Haliehana Stepetin.	Glen Miller Ballroom in UMC - 210; Open Session - HYBRID
9:00 AM - 10:00 AM	Workshop 1 : Finding or Creating a Home Dr. Haliehana (Hana) Stepetin (Unangaʻ) and Mars Sadidaʻ Kashevarof	Theme: Place-based and Land-based Learning In and About the Arctic	This hands-on workshop focuses on creative writing.	Glen Miller Ballroom in UMC - 210; Open Session - HYBRID
10:00 AM - 10:30 AM	Drop in Activity: Unangaʻ Weaving (Deliverer TBC)	Theme: Place-based and Land-based Learning In and About the Arctic	Take a moment to do some weaving. Weaving has been part of Unangaʻ heritage for thousands of years, from large fish baskets to small ornaments. Since the Unangaʻ people arrived, and the oldest sites archaeologically found are about 5,000-9,000 years ago. So that's a long time!	Glenn Miller Ballroom in UMC 210
10:00 AM - 10:30 AM	Drop in Activity: Quilting Squares (Deliverer TBC)	Theme: Place-based and Land-based Learning In and About the Arctic	This hands-on 'drop in' activity is based on Anne Garland's Science Technology, Engineering, Art, Mathematics (STEAM) education project "Hazard Blocks" created by Utqjagvik Youth. Anne is interested in applying natural science and social science research to assist community based decision making in the areas of Historical Ecology, ...An open invitation to print, draw, stitch, collage a small square representing your teaching, science, work, responses, and concerns, building a patchwork of themes from ASSW2025 Business and Community Meetings and the PEI Conference theme Polar Bridges.	UMC - 417, fourth floor
10:00 AM - 10:30 AM	Coffee Break			ASSW provided; outside of ballroom
10:30AM - 12:00 PM	Workshop 2: Intergenerational and Cross-cultural Arctic Learning with Youth through GLOBE and Community Science Dr. Katie Spellman and Dr. Elena Sparrow	Theme: Place-based and Land-based Learning In and About the Arctic	Join us for a hands-on mini workshop in methods for youth-centered, community-based research that connects local climate issues to regional and global datasets. We will demonstrate the use of culturally sustaining inquiry, storytelling, and resources to facilitate Global Learning and Observations to Benefit the Environment (GLOBE) investigations with youth. You will leave with lesson plans and activities to apply in your home community.	Glen Miller Ballroom in UMC - 210; Open Session - HYBRID
10:30 AM - 12:00 PM	Drop in Activity cont: Unangaʻ Weaving (Deliverer TBC)	Theme: Place-based and Land-based Learning In and About the Arctic	Take a moment to do some weaving. Weaving has been part of Unangaʻ heritage for thousands of years, from large fish baskets to small ornaments. Since the Unangaʻ people arrived, and the oldest sites archaeologically found are about 5,000-9,000 years ago. So that's a long time!	UMC - 417, fourth floor

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Time	Event	Theme	Description	Location
12:00 PM - 1:30 PM Lunch				
1:30 PM - 2:00 PM	Theme Speaker: Chelsea Koch Presentation: Observing Change in Arctic Marine Ecosystems Through a Multifaceted Lens: Research, Education, and Knowledge Co-Production	Theme: The Polar Oceans & Plastics	I will present how my research uses various tools including sea ice lipid biomarkers, oceanographic observations, and co-produced knowledge to observe rapid changes underway in the northern Bering Sea and Chukchi marine ecosystem. By weaving together these measurements with hunters' observations, we are seeking a more holistic understanding of climate-driven shifts in Arctic food webs today and in the future that is relevant to community concerns. I will also discuss how I aim to bring these concepts into the classroom through Indigenous guest lectures, co-produced research products, real-world data analysis, and coding, providing students with practical skills to better understand and engage in Arctic environmental science.	Glen Miller Ballroom in UMC - 210; Open Session - HYBRID
2:00 PM - 3:00 PM	Workshop 3: Sea Ice and Ocean Currents Connecting People and Science with Float Your Boat Program Sarah Johnson with Wild Rose Education	Theme: The Polar Oceans & Plastics	Get hands on with maps, buoys, and small wooden boats in the Arctic Ocean with Sarah Johnson, climate educator from Wild Rose Education guiding you through fun, interactive sea ice and Arctic Ocean currents activities that can be used with any age group of learners. You will learn about how drifting Arctic buoys help us understand the weather, ocean currents, sea ice movement, and ultimately planetary climate change.	Glen Miller Ballroom in UMC - 210; Open Session - HYBRID
2:00 PM - 5:00 PM	ART! * HERE: A place-based polar image bridge exhibition * Quilting Squares		Take a moment and check out the ongoing art exhibition that includes a continuous photo show, and a quilting activity to demonstrate 'hazard blocks'.	UMC - 417, fourth floor
3:00 PM - 3:20 PM	Presentation: Melody Burkins Rethinking the Practice of Arctic Science Diplomacy		The field of science diplomacy is increasingly recognized as essential for addressing global challenges like climate change, security, and AI. While international efforts have advanced norms for the scope and practice of science diplomacy, existing frameworks fail to center Indigenous Peoples' rights and knowledge. In the Arctic, over 500,000 Arctic Indigenous Peoples face growing challenges and have established clear protocols for ethical, equitable engagement across science and policymaking. As such, the practice of Arctic science diplomacy must be explicitly defined to prioritize knowledge co-creation with Arctic Indigenous Peoples and ensure their full representation in research, governance, and decision-making.	Glen Miller Ballroom in UMC - 210; Open Session - HYBRID
3:20 PM - 3:30 PM	Review Day		Wrap up the day and hear about tomorrow's agenda. Provide feedback.	Glen Miller Ballroom in UMC - 210
3:30 PM - 4:00 PM Coffee Break				
5:00 PM - 7:00 PM	Polar Educators International: Continuing the Global Dialogue - Hosted by Julia Dooley, Anita Laferty, Haliehana Stepetin & Sophie Weeks (online participation)		You are welcome to join us in a World Cafe™ for meaningful conversations that honour Indigenous Knowledges, strengthen connections, and reimagines polar research and education.	ASSW provided; outside of ballroom Glen Miller Ballroom in UMC - 210; Open Session - HYBRID
7:00 PM Adourn				
Sunday, 23 March 2025				
Time	Event	Theme	Description	Location
7:45 AM	Room Open			Glen Miller Ballroom in UMC - 210; Open Session - HYBRID
8:00 AM - 8:30 AM	Welcome Back - Recap Day 1 - Plan of Day 2 - Housekeeping			Glen Miller Ballroom in UMC - 210; Open Session - HYBRID
8:30 AM - 9:00 AM	Theme Speaker: Jeff Kerby Presentation: Picture the Polar Regions: images to inspire, educate, and inform science	Theme: Earths Cryosphere: Change in the Arctic, Antarctic and High Mountain Regions	The frozen polar regions of the planet are warming, leading to widespread changes on land, sea and atmosphere that extend across the planet. This has direct impacts on people that live in these regions, but also those who may never visit the poles. Change to the cryosphere has widespread implications for ecosystems, but monitoring and understanding these shifts are a challenge. Photography has long been used to inspire curiosity about the polar regions, but it can also be used to tell only one side of a story. In this talk, I'll discuss the potential of pictures - whether from camera phones or satellites - to capture core and emerging narratives about the changing cryosphere, and their flexibility for use in education, accessibility, and cutting edge scientific research.	Glen Miller Ballroom in UMC - 210; Open Session - HYBRID
9:00 AM - 9:30 AM	Presentation 1: Kataisee Attagutsiak Peace within Bridging the Gap	Theme: Earths Cryosphere: Change in the Arctic, Antarctic and High Mountain Regions	Presenting remotely, Kataisee will be introducing Inuit knowledge and how it is being applied with scientific and knowledge base researches.	Glen Miller Ballroom in UMC - 210; Open Session - HYBRID

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Time	Event	Theme	Description	Location
9:30 AM - 10:00 AM	Presentation 2: Tim Martin From the Classroom to Polar Expedition Guide - Expanding the Reach of Polar Education	Theme: Earths Cryosphere: Change in the Arctic, Antarctic and High Mountain Regions	I will briefly share my story of working at the ends of the Earth. As a classroom teacher I became involved in Polar Science through Polar TREC. After participating with a major IPY research project, we conducted educator workshops and published how we engaged students with climate science by doing local investigations. Now later in my career, I am teaching at the University level and working part time as a Polar Expedition Guide for National Geographic Lindblad Expeditions. In this role my teaching environment has moved from the classroom to the field in the Arctic and Antarctic, and my students have shifted from 14 years old to mostly retired adults who are eager to learn more about the places we travel.	Glen Miller Ballroom in UMC - 210; Open Session - HYBRID
9:00 AM - 12:00 PM	ART! * HERE: A place-based polar image bridge exhibition * Quilting Squares		Take a moment and check out the ongoing art exhibition that includes a continuous photo show, and a quilting activity to demonstrate 'hazard blocks'.	UMC - 417, fourth floor
10:00 AM - 10:30 AM	Coffee Break			ASSW provided; outside of ballroom
10:30 AM - 11:00 AM	Presentation 3 (online): Sunniva Sorby Stories of Hope from Svalbard: Women, Exploration, and the Power of Compassion	Theme: Earths Cryosphere: Change in the Arctic, Antarctic and High Mountain Regions	This presenter will be sharing remotely. This presentation will take the audience on a journey to Svalbard, where I spent 19 months living in isolation, immersed in the Arctic's raw beauty. Through personal stories of resilience, connection, and discovery, I'll share how this experience deepened my understanding of compassion, courage, and the importance of hope in the face of adversity. I'll explore how a sense of interconnectedness can empower us—to lead with strength and grace in a changing world. This is a talk about data / research, the power of storytelling, and the lessons we can learn from the Arctic to nurture hope in	Glen Miller Ballroom in UMC - 210; Open Session - HYBRID
11:00 AM - 12:00 PM	Panel Discussion: How to communicate about the changes in the polar regions to the public	Theme: Earths Cryosphere: Change in the Arctic, Antarctic and High Mountain Regions	Moderated panel discussion with the three presenters focusing on how they communicate the changes in the polar regions and connect broader audiences to these unique parts of the globe. Panel to be moderated by Janet Warburton.	Glen Miller Ballroom in UMC - 210; Open Session - HYBRID
12:00 PM - 1:30 PM	Lunch			ASSW Provided Lunch; Location TBA
1:30 PM - 5:00 PM	ART! * HERE: A place-based polar image bridge exhibition * Quilting Squares		Take a moment and check out the ongoing art exhibition that includes a continuous photo show, and a quilting activity to demonstrate 'hazard blocks'.	UMC - 417, fourth floor
1:30 PM - 2:00 PM	Presentation: Emily Artinian Street Road Artists Space, Participatory Art, and Citizen Science	Theme: Place-based and Land-based Learning In and About the Arctic	Along with artist Adam Fung and Julia Dooley of Polar Educators International, Emily Artinian and Carol Maurer of Street Road Artists Space were asked to co-curate the participatory photography project taking place at this year's PEI conference (HERE: A place-based polar image bridge). Artinian and Street Road, which she founded in 2011, have long been involved in facilitating and developing art happenings that can be understood as participatory artwork, citizen-based art, or, in more theoretical terms, relational aesthetics. Projects have involved dozens or even hundreds of participants and have been insistent on seeing audience members as co-creators. In a brief overview of selected Street Road works and also the PEI photography submissions that will be screening throughout the conference, Emily will reflect upon these audience-focused branches of contemporary art, and will loosely posit a connectedness to the phenomenon of citizen science.	Glen Miller Ballroom in UMC - 210; Open Session - HYBRID
2:00 PM - 2:30PM	Presentation 4: Professor Gareth Rees, The Cryosphere and the Arctic	Theme: Earths Cryosphere: Change in the Arctic, Antarctic and High Mountain Regions	Gareth Rees gives a quick tour of the cryosphere, the collective term for the parts of Earth where water is frozen. The cryosphere is where the earth is coldest - around the Arctic, the Antarctic, and the 'third pole' of High Mountain Asia, but its components are not arranged symmetrically or uniformly. Ice is found in ice sheets and glaciers, sea ice, frozen rivers and lakes, snow, and permafrost. The cryosphere, especially the arctic part, plays an especially important role in the climate system and is a hotspot of climate change. The terrestrial arctic cryosphere is also home to the huge boreal forest and to a significant human population, from Alaska and Canada, through Iceland and Greenland, northern Europe, and into Russia. The cryosphere matters hugely, for the climate and for the people who live in and around it, yet is already difficult to study and this is becoming harder as the arctic world fragments.	Glen Miller Ballroom in UMC - 210; Open Session - HYBRID
2:30 PM - 2:45 PM	Presentation 5: Ulyana Nadia Horodyskyj Pollution in Pristine Places	Theme: Earths Cryosphere: Change in the Arctic, Antarctic and High Mountain Regions	Despite their remoteness, the Arctic, Antarctic, and high mountain regions are increasingly affected by human-driven pollution. This talk explores the presence and impact of black carbon, a short-lived climate pollutant, in these fragile environments. Black carbon, produced by the incomplete combustion of fossil fuels and biomass, darkens snow and ice, accelerating melt and disrupting ecosystems.	Glen Miller Ballroom in UMC - 210; Open Session - HYBRID

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2:45 PM - 3:30PM	Snap Talks - Betty Trummel (USA), (in person) - Matteo Cattadori (Rovereto, Italy); Albedo and Ice: a Feedback in Action (pre-recorded) - Marilena Dracea-Chelsoi (Bucharest, Rumania); Teaching efficiently Polar Studies in English in Rumania. My own experience. (pre-recorded) - Exodus Chun-Long Sit (Hong Kong, China); Some Polar Education Approaches (pre-recorded) - María José Nariño Vargas; The Arctic Flag Initiative (in Spanish and pre-recorded)		Hear from several educators about their various projects and efforts in polar science! Some of these talks will be in person and others have been pre-recorded.	Glen Miller Ballroom in UMC - 210; Open Session - HYBRID
Sunday, 23 March 2025				
Time	Event	Theme	Description	Location
3:30 PM - 4:00 PM	Coffee Break			ASSW provided; outside of ballroom
4:00 PM - 5:00 PM	Finding a way to the next International Polar Year: Connecting educators to IPY5 Sophie Weeks, Ramcharan Vijayaraghavan (online host), Alona Yefimenko, and Neelu Singh		During this discussion, PEI representatives will share information IPY and other activities that are relevant to participants and facilitate a discussion about issues and ideas that are important to the workshop participants. This information will be recorded and submitted as part of the process for international Arctic research planning (ICARP IV) and build towards IPY polar education planning).	Glen Miller Ballroom in UMC - 210; Open Session - HYBRID (speed meets, bridge building and information collecting)
5:00 PM - 5:30 PM	Review Day		Share how the day went! Provide feedback to the organizers and hear about the field trips and other events.	Glen Miller Ballroom in UMC - 210
5:30 PM	Adjourn			
Monday, 24 March 2025				
Time	Event	Theme	Description	Location
8:30AM-10:30AM	Optional Field Trip to NOAA <i>Pre-Registration Required.</i> Lead: Melissa Barker		Currently, this trip is at capacity. We will announce any space at our workshop.	Off Site; Meet-Up Location to be Announced (Contact Julia Dooley for more information.)
8:00 AM - 5:00 PM	Optional Field Trip to NSF Ice Core Facility <i>Pre-Registration Required.</i> Lead: Julia Dooley and Louise Huffman		Currently, this trip is at capacity. We will announce any space at our workshop.	Off Site; Meet-Up Location to be Announced (Contact Julia Dooley for more information.)
5:00 PM	Adjourn			
Polar Education Practice & Research ICARP IV Consultation				
Time	Education-Related Event	Theme	Description	Location
Friday 21 March, 9:00 AM - 2:00 PM	ICARP IV Education & Knowledge Sharing in and about the Arctic: Practice & Research Priority Topic 6 Planning Workshop		This is closed meeting but it is for educators if they wish to contribute, a member of PEI on the Team can relay. Talk with Sophie Weeks. https://icarp.iase.info/engagement/research-priority-teams/research-priority-team-6	UMC Fourth Floor 417
Monday 24 March, 1:30 PM - 3:30 PM	Workshop: Evidence-Based, Community-Centered Design for Arctic Science Education and Outreach; Organiser: Katie Spellman, Anne Gold, Malinda Chase, Elena Sparrow, Alyse Thurber, Sarah Clement, Anja Kade, John Smelter, Fawn Jelinek, Sharon Attila (Navigating the New Arctic Community Office, USA)		The best practices for science education and outreach in the Arctic has shifted dramatically over the past 30 years as “helicopter scientist” presentations to arctic classrooms have gradually been replaced by more thoughtful youth and community-centered approaches. This workshop introduces participants to principles of evidence-based, community-centered design of science outreach and education programming in the Arctic.	Glen Miller Ballroom - UMC 210; Open Session, On-site only
Tuesday 25 March, 4:00 PM - 5:00 PM	The “Polar Resource Book”. From a landmark educational legacy of the 4th IPY, to a renewed educational tool for the 5th IPY and ICARP IV Organisers: Maria Pia Casarini (Polar Educators International, PEI)		A legacy project of the 4th International Polar Year (IPY) (2007-2008), which included a focus on polar education, was the publication of an innovative book: Polar Science and Global Climate: An International Resource for Education and Outreach (Pearson, 2010), known as the “Polar Resource Book” (PRB). It is an impressive tool for scientists, teachers, and educators, available on the website: polareducator.org/resources .	UMC - 386, 3rd Floor; Open-Hybrid
Friday 28 March, 8:30 AM - 10:00 AM	PEI Convened Session: Bridges of the Arctic - extending the impacts of polar education pedagogies, practice-based research and public engagement in polar science		This session will provide a unique bridge for practitioners and researchers to discuss education topics within the ICARP IV RPT6 research planning context, connecting with current research, indigenous knowledge and impactful approaches, techniques and resources for reaching a diverse range of learners.	UMC Fourth Floor - 425; Open Session - Hybrid
Time	ICARP IV Event		Description	Location
Tuesday 25 March, 8:30 AM - 10:00 AM	ICARP IV Summit - Opening Ceremony		Opening Ceremony. Open Session - HYBRID; see online program for full details.	Glen Miller Ballroom - UMC 210 / 212
Tuesday 25 March, 10:00 AM - 12:00 PM	ICARP IV Summit - Opening Panel on the Future of the Arctic		Opening plenary for the conference. Open Session - HYBRID; see online program for full details.	Glen Miller Ballroom - UMC 210 / 212
Tuesday 25 March, 6:00 PM - 8:00 PM	ICARP IV Summit Welcome Reception			Glen Miller Ballroom - UMC 210 / 212
Thursday 27 March, 8:00 AM - 10:00 AM	ICARP IV Research Priority Team (RPT) 6 Town Hall Session: Education and knowledge-sharing in and about the Arctic: Research and Practice		Town hall session for RPT 6 group. https://icarp.iase.info/engagement/research-priority-teams/research-priority-team-6 Open Session - HYBRID	UMC Second Floor - 235