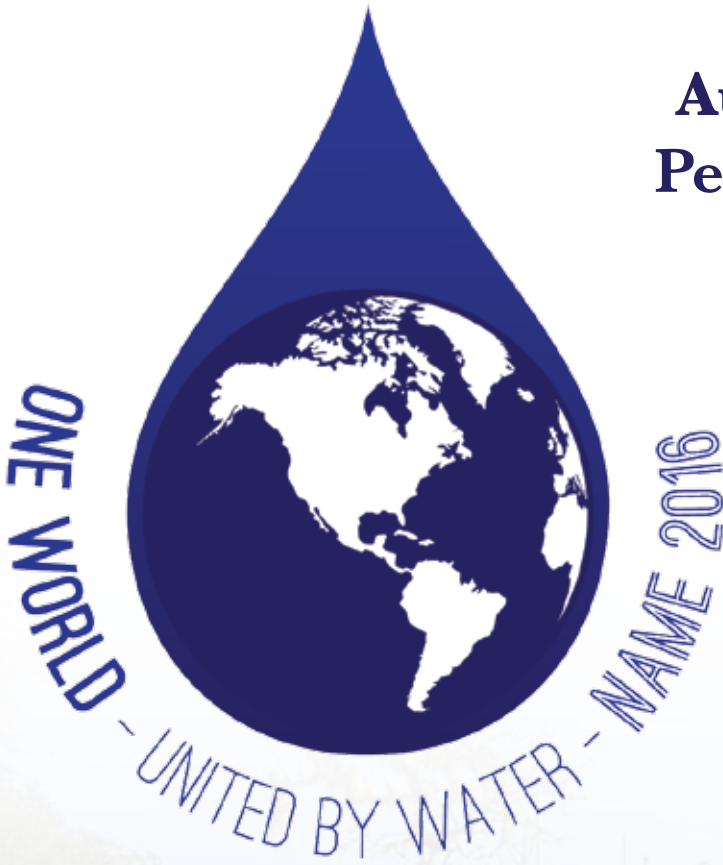




NAME

NORTHWEST AQUATIC & MARINE EDUCATORS

August 14 – 18, 2016
Pearson College UWC
Metchosin, BC





Welcome to beautiful Metchosin, BC!

Nestled in the wooded surroundings of Metchosin, BC, and on the serene shores of Pedder Bay, Pearson College's Campus is a truly ideal space to network, share ideas, and gather inspiration. You'll instantly feel the meaning of "island time" when you arrive in this rural town just 20 km outside Victoria, BC. With the Pacific Ocean and rugged rainforest all around, there is an abundance of beautiful hikes, access to a variety of beaches (both fresh and salt water), whale watching and kayaking opportunities, and no lack of space to relax and enjoy your surroundings.

Pearson College UWC is a two-year pre-university school (Grade 12 and Gap Year) for up to 200 students from over 100 countries who live, study and grow together at the edge of the western world. We believe that education is a force to unite people, nations and cultures for peace and a sustainable future. Our education is transformational.

The College was named in honour of the work done by the late Canadian Prime Minister and Canada's only Nobel Peace Laureate, Lester B. Pearson. Prime Minister Pearson initiated the work to found a United World College "of the Pacific" as a way of continuing the promotion of peace and understanding in the world.

Pearson College is one of 15 UWC schools and colleges worldwide.

PEARSON COLLEGE



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Conference Strands:

1. Ocean Literacy {LITERACY}

The ocean defines our planet and affects all natural processes on the earth. Being ocean literate means understanding how the ocean influences us and how we, in turn, influence the ocean. The seven principals of ocean literacy encompass many disciplines and help guide us to increase ocean literacy in our communities. What tools do you use to help increase your students' ocean literacy? Do you address any of the seven principles of ocean literacy in your classroom or community?

2. Connecting to Place: Environmental Education and Indigenous Sciences {PLACE}

In British Columbia and around the world, educators are working to emphasize the importance of incorporating Indigenous knowledge into the science curriculum. This approach also values the importance of connection to place and to each other. Do all cultures have their own science? What tools have you used to incorporate Indigenous science and other cultural concepts into your curricula? How can this place-based approach to environmental education translate into global stewardship?

3. Watersheds: communities without borders {WATERSHEDS}

Everything is connected. Even land-locked regions are ultimately connected to the ocean, and far-removed human activities such as farming and urban development influence ocean health through the freshwater systems that connect them. How do you incorporate themes around human activities that influence the health of watersheds into your curriculum? What tools have you used to help increase the resilience of your local waterways? How have your students taken action to protect your local waterway? What tools do you use to raise awareness about these issues in your school and community?

NAME Conference Traditions

With forty conferences under our collective belt, we can't help but have a few traditions. If you are a first-time NAME member or conference attendee (and even if you aren't), read on...

NAME Board Meeting: This is a gathering of NAME's leaders (at least, the elected and appointed ones). All NAME members are invited to witness leadership in action, come meet the core members of NAME, bring your suggestions, new ideas and complaints.

SeaFaire: Consider it an idea and innovation garage sale, free of charge. Browse brochures, flyers, curriculum, and lots of free giveaways. SeaFaire will be held Monday evening, from 7 to 8:30 pm following our dinner and chapter meetings. Conference attendees and local organizations are welcome to reserve a table and show off during this event.

Annual NAME Auction: Always a conference highlight, the auction raises funds for NAME's mini-grant and scholarship programs. Auction items are varied and donated by members and local organizations, and you never know what will be on the table. There is normally both a silent and live auction. Our banquet theme this year plays off of Washed Ashore's concept of trash turned to art. Design your own piece of marine and aquatic inspired art from found items and beach debris to show off your creativity. Bonus points if it's wearable!

Chapter Meetings: These meetings give members of each province and state a chance to meet together and plan the upcoming year. Find out what great stuff is happening in your own backyard.

NAME General Business Meeting: U.S. non-profit law requires a general membership meeting once each year, and this is it. Don't miss this opportunity to learn about the latest NAME innovations, programs, and plans for the future. Be involved.

NAME Awards Banquet: Don't miss a great evening capped off with our annual fund-raising auction, food, friends, and fun!

General Conference Information

NAME Registration/Information Desk: Registration and check-in will begin at 4:00 pm on Sunday, August 15. The NAME Registration/Information Desk will be in the atrium of the Dining Hall. Registration will be open each morning and throughout the day as needed

Presenters: Please check in at the registration table and double check the media set up prior to speaking. Don't hesitate to ask for support if you need it.

SeaFaire: SeaFaire will be held Monday evening, from 3:30 to 5:30 pm. Conference attendees and local organizations are welcome to reserve a table and show off during this event. Tables and displays can be left up unattended throughout the conference, if desired, but must be removed by Thursday morning at 10:00 am.

Message Board: There will be a message board at the registration table if you want to coordinate rides or simply leave people messages.

NAME tags: Wear 'em! They are your tickets to events, food, and other cool stuff. Besides, it helps you hide the fact that you can't quite remember that person you met last year, and helps the people you meet for the first time this year remember you next year.

Meals: All meals will be provided for registered participants and their registered guests. All meals will be served in the Dining Hall. If you would like to purchase meals for a guest, please see someone at the registration table.

Guest Meal Tickets: If you have purchased additional tickets for your guest/s for meals, banquet, auction, etc., you will receive a name tag for your guest at registration when you check-in. Please use these for entrance to these events.

Field Trips: If you have signed up for a field trip, please confirm your slot when you check in at the registration table and check for departure time and carpool information. If you haven't signed up yet, we encourage you to check to see if there are any openings left...we'd love to have you join us for an experience that will highlight the rich environment of Vancouver Island!

Beverage Cup/Water Bottle: We are dedicated to the Green Conference philosophy. In order to reduce waste, we encourage you to bring your own beverage cups for breaks and the like. Please, don't forget to carry your own cup with you!

Event Waiver Form: Just in case you snuck by us, make sure you have a signed Event Waiver Form turned into Registration. These forms are protection for NAME and you!



Conference Planning Committee

The following people put in countless hours to coordinate everything that made this conference a success: speakers, field trips, presentations, lodging, food, the auction, registration, and all the other details that often go unnoticed.

Cathy Carolsfeld

Carolina Carolsfeld

Sile Kafrissen

Jennifer Magnusson

Gloria Snively

Anne Stewart

Margy Ransford

Jennifer Howell

Jan Kravac

About Northwest Aquatic & Marine Educators

NAME was founded in 1976 and became a chapter of the National Marine Educators Association in 1980. In the early 1990s NAME expanded its mission and membership, recognizing that marine and aquatic ecosystems, environments, and issues are linked together, and that educators working in both environments share common beliefs and strategies. NAME includes members from Alaska, British Columbia, Washington, and Oregon. Annual NAME conferences rotate through these states and province. In addition, each state or province offers local professional development opportunities for formal and non-formal educators throughout the year.

NAME is a “family” of educators who believe:

- Every human on earth should be water-literate
- Using the allure of water enriches and facilitates learning
- Sharing our knowledge and experience with others creates a community of informed stewards
- NAME has an innovative and energetic Board of Directors guided by dedicated members from Alaska, British Columbia, Washington and Oregon to fulfill our mission and goals.

NAME’s Goals:

- Encourage professional growth by offering quality workshops, conferences, field experiences, and in-service opportunities in the Pacific Northwest
- Share information and education materials focused on marine and aquatic environments and issues
- Support a growing network of NAME educators who reflect the diverse communities of the Pacific Northwest

NAME is a 501(c)(3) nonprofit organization.

2015-2016 NAME Leadership

We would like to extend a heartfelt thanks to the 2015-2016 NAME Board of Directors! Each member of the board is instrumental in ensuring that our organization runs smoothly and is able to offer all the exciting opportunities we can to our members. Thank you all for your time!

If you would like to join this team of passionate educators, we welcome you to attend any of our board meetings to see what it's all about. We have two in-person meetings (winter/summer) and two conference calls annually.

Board of Directors

Casey Ralston, President, OR
Woody Moses, President-elect, WA
Giovannina Souers, Past President, WA
Amy Cole, Secretary, WA
Rob Coats, Treasurer, OR
Bill Hanshumaker, NMEA Representative, OR
Marilyn Sigman, Alaska Director
Sile Kafriksen, British Columbia Director
Jenna Kulluson, Oregon Director
Amy Sprenger, Washington Co-Director
Maile Sullivan, Washington Co-Director

Committee Chairs

Orlay Johnson, Communications Co-chair, WA
Joy Tally, Communications Co-chair, OR
Jenna Kulluson, Flashmail Manager, OR
Jennifer Magnusson, Webmaster, WA
Gretchen Glaub, Membership Chair, WA
Alan Rammer, Award Chair, WA
Fawn Custer, Mini-grants/Scholarships Chair, OR



Concurrent Sessions: Monday

Monday • 10:30 - 11:15 am • Concurrent Session A	
AB-BL WATERSHEDS	1. Learning Resources for a Blue Planet (90 mins) <i>Alex King, Kelly Nordin, and Heather Murray</i>
FB-MSL PLACE	2. Incorporating First People's Principles and Digital Storytelling (90 mins) <i>Tvonne Dawydiak and Mary Holmes</i>
FD LITERACY	3. Get your Hands Wet: A Workshop for Marine Educators (90 mins) <i>Reed Osler</i>
AB-CL WATERSHEDS	4. Connecting People to their Watersheds using Real World Examples <i>Nicole Gilmore and Jennifer Whipple</i>
DL PLACE	5. Nuuciq Spirit Camp: Weaving Environmental Education and Traditional Ecological Knowledge in Alaska <i>Kay Shoemaker</i>
Monday • 11:30 am - 12:15 pm • Concurrent Session B	
AB-BL WATERSHEDS	1. Learning Resources for a Blue Planet (cont'd) <i>Alex King, Kelly Nordin, and Heather Murray</i>
FB-MSL PLACE	2. Incorporating First People's Principles and Digital Storytelling (cont'd) <i>Tvonne Dawydiak and Mary Holmes</i>
FD LITERACY	3. Get your Hands Wet: A Workshop for Marine Educators (cont'd) <i>Reed Osler</i>
AB-CL LITERACY	4. Aliens Amongst Us—Dissect a large squid and learn about the biology, evolution and mythology of Octopus, Squids, and other Cephalopods; <i>Orlay Johnson and Janice Mathisen</i>
AB-MC LITERACY	5. Pacific Northwest Tides <i>Cindy Bryden</i>
Monday • 1:15 - 2:00 pm • Concurrent Session C	
AB-BL WATERSHEDS	1. Aquatic Invasive Species: A Hands-on Approach (90 mins) <i>Sue Staniforth</i>
FB-MSL LITERACY	2. Pulling Together for Ocean Literacy in Canada and Beyond (90 mins) <i>Anne Stewart</i>
AB-CL PLACE	3. Knowing Home: Braiding Indigenous Science with Western Science <i>Gloria Snively</i>
AB-MC LITERACY	4. Fitting Environmental Education in Crowded Elementary Classroom Schedules <i>Wendelin Dunlap</i>
FB-PC PLACE	5. This is Your Brain on Water: Senses of Place and Placelessness <i>Marilyn Sigman</i>
Monday • 2:15 - 3:00 pm • Concurrent Session D	
AB-BL WATERSHEDS	1. Aquatic Invasive Species: A Hands-on Approach (cont'd) <i>Sue Staniforth</i>
FB-MSL LITERACY	2. Pulling Together for Ocean Literacy in Canada and Beyond (cont'd) <i>Anne Stewart</i>
AB-CL PLACE	3. Place-Based Learning in the new BC Curriculum <i>Lenny Ross</i>
FB-PC LITERACY	4. Romance, Violence, and Ocean Literacy <i>Richard Kool</i>
AB-MC PLACE	5. Indigenizing College Marine Biology <i>Annette Dehalt</i>

AB-BL: Academic Building – Biology Lab

AB-CL: Academic Building – Chemistry Lab

AB-MC: Academic Building – Math Classroom

DL: Director's Lawn (outdoors)

FB-MSL: Floating Building – Marine Science Lab

FB-PC: Floating Building – Philosophy Classroom

FB-EC: Floating Building – English Classroom

FD: Floating Dock (outdoors)

Concurrent Sessions: Wednesday

Wednesday • 1:15 - 2:00 pm • Concurrent Session E	
FB-EC PLACE	1. Connecting Ocean Science with Indigenous Place-based Knowledge (90 mins) <i>Jessica Brown and Mercedes McLean</i>
FB-MSL LITERACY	2. Gumboot Garden Tour: The Value of Creatures as Teachers (90 mins) <i>Dr. Louise Page, Catherine Carolsfeld, and Laura Kravac</i>
AB-BL WATERSHEDS	3. Stream to Sea—Dive into Watershed Education <i>Don Lowen</i>
AB-MC PLACE	4. Understanding Geologic Time and Using Storytelling to Explain the World Around Us: An Interdisciplinary Grade 7/8 Unit Overview; <i>Kim Zumach, Michelle Dixon, and Mikki Reintjes</i>
Wednesday • 2:15 - 3:00 pm • Concurrent Session F	
FB-EC PLACE	1. Connecting Ocean Science with Indigenous Place-based Knowledge (cont'd) <i>Jessica Brown and Mercedes McLean</i>
FB-MSL LITERACY	2. Gumboot Garden Tour: The Value of Creatures as Teachers (cont'd) <i>Dr. Louise Page, Catherine Carolsfeld, and Laura Kravac</i>
FB-PC WATERSHEDS	3. The BIG Picture: The Journey Down the Drain, into the Watershed, & Green Cleaners <i>Mary Coleman</i>
AB-MC LITERACY	4. Connecting to the Coast and Ocean <i>Joy Tally</i>
Wednesday • 3:15 - 4:00 pm • Concurrent Session G	
AB-BL PLACE	1. (re)Learn about the Environment / Diversify and Decolonize the Environment (90 mins) <i>Kati George-Jim and Denni Clement</i>
FB-EC WATERSHEDS	2. Flow: Art Projects that Connect Local Watersheds to Ocean Health <i>Robi Smith</i>
FB-PC PLACE	3. Strong Nations Publishing – Discover 3 New Books <i>Terri Mack and Brenda Boreham</i>
DL LITERACY	4. Nature Journaling <i>Anne Lei-Yeung So</i>
Wednesday • 4:15 - 5:00 pm • Concurrent Session H	
AB-BL PLACE	1. (re)Learn about the Environment / Diversify and Decolonize the Environment (cont'd) <i>Kati George-Jim and Denni Clement</i>
FB-PC PLACE	2. Including Multiple Narratives in a Nature Kindergarten <i>Enid Elliot</i>
FB-EC LITERACY	3. How Quiet is the World Ocean? <i>William Hanshumaker</i>
FB-MSL WATERSHEDS	4. Connecting the School to the Stream <i>Jody Watson</i>

Conference Themes:

LITERACY: *Ocean Literacy*

PLACE: *Connecting to Place: Environmental Education and Indigenous Sciences*

WATERSHEDS: *Watersheds: communities without borders*



Conference at a Glance

Sunday • August 14

- 8:30 am–4:00 pm Pre-conference Workshop
- 10:00 am–3:00 pm NAME Board Meeting and conference set up
- 4:00–5:30 pm Registration (ongoing)
- 5:30–6:30 pm Dinner
- 6:30 pm Welcome Gathering
Beecher Bay Youth Drumming Group

Monday • August 15

- 7:00–8:00 am Breakfast is served
- 8:00–8:45 am Registration Open
- 9:00 am NAME Welcome
- 9:15–10:15 am Keynote: Lenny Ross
- 10:15–10:30 am Coffee Break
- 10:30–11:15 am Concurrent Session A
- 11:30–12:15 pm Concurrent Session B
- 12:00–1:00 pm Lunch
- 1:15–2:00 pm Concurrent Session C
- 2:15–3:00 pm Concurrent Session D
- 3:00–3:30 pm Coffee Break/SeaFaire and Poster Session set up
- 3:30–5:30 pm SeaFaire/Poster Session & Mingle
- 5:30–6:30 pm Dinner is served
- Evening Social and music time—Free time to continue
browsing the SeaFaire, and enjoy the facilities at
Pearson, including the pool!

Tuesday • August 16

- 7:00–8:00 am Breakfast is served
- 8:00–8:45 am Registration Open
- 9:00–10:00 am Keynote: Eileen van der Flier Keller
- 10:30 am–5:00 pm Field Trips
- 5:30–6:30 pm Dinner is served
- 6:30 pm Guest Speaker—Graeme Burgan, Education and
Interpretation Ranger, Phillip Island Nature Parks

Wednesday • August 17

- 7:00–8:00 am Breakfast
- 8:00–8:45 am Registration Open
- 9:00–10:00 am Keynote: Jane Watson
- 10:00–10:15 am Coffee Break
- 10:15 am–12:00 pm NAME General Meeting
- 12:00–1:00 pm Lunch served; NAME Chapter Meetings
- 1:15–2:00 pm Concurrent Session E
- 2:15–3:00 pm Concurrent Session F
- 3:00–3:15 pm Coffee Break
- 3:15–4:00 pm Concurrent Session G
- 4:15–5:00 pm Concurrent Session H
- 6:00 pm Awards Banquet, Auction, and Dance!
DJ: *Hjalmer Wenstob*

Thursday • August 18

- 7:00–8:00 am Breakfast is served
- 9:00–9:30 am Closing Ceremony
- 10:00 am Conference Clean up/SeaFaire take down

Conference Details

Sunday, August 14

10:00 am–3:00 pmNAME Board of Directors meeting (*Woodward building*)

Board meetings are open to any NAME member who would like to sit in and hear what's happening in the organization at the grass-roots level!

8:30 am – 4:00 pmPre-conference Workshop (*Academic Building – Biology Lab*)

Visualizing Change: Training and Tools to Support Ocean Change Educators

Instructors: Katie Hart (Seattle Aquarium) and Nicole Killebrew (Seattle Aquarium) are Pacific Northwest project representatives. Both are key staff and have helped in development, testing, and training educators in the use of all four visual narratives.

Learn how to engage your audience around climate and ocean change with compelling narratives using global data visualizations. This one-day training will provide:

- An introduction to strategic framing communication through the National Network for Ocean and Climate Change
- Interpretation (NNOCCI)
- Materials and training in the use of four strategically-framed visual narratives on the topics of Extreme Weather Events, Sea Level Rise, Ocean Acidification, and The Ocean-Climate Connection (visual narratives are designed for use on a flat screen, Hyperwall, interactive spherical display such as Science on a Sphere® or Magic Planet®, or handheld tablet)
- Tools for training colleagues and staff on the use of framing elements, global data sets, and narrative presentation
- Each participant will receive an Electronic Toolkit including ALL narratives and visuals, scientific and strategic framing briefs for each topic, recommendations for facilitation, and a video demonstration of each narrative.

4:00–5:30 pmRegistration (*Dining Hall Atrium*)

- Please bring in your Auction Item to drop it off here
- Field trip check-in, volunteer sign up
- Message Board Available

5:30–6:30 pmDinner is served (*Dining Hall*)

6:30 pmWelcome Gathering (*Director's Lawn*)

The Beecher Bay Youth Drumming Group will help open the conference and welcome us to their territory through their traditional drumbeat.

EveningCampus tour, social and music time

Free time to enjoy the facilities at Pearson, including the pool!

Monday, August 15

7:00–8:00 amBreakfast (*Dining Hall*)

8:00–8:45 amRegistration (*Dining Hall Atrium*)

9:00 amNAME Welcome

9:15–10:15 amKeynote Speaker: **Lenny Ross** (*Max Bell Theatre*)

Nature Centered, Place-Based Learning – The evolution of an aquatic and marine educator

Using such resources as Project Wild, and the contacts and resources gained from NAME membership, events, and journals, Lenny created district programs that focused on marine and aquatic environmental sciences. Over time these programs evolved to first include an Aboriginal education focus. Eventually his approach morphed to adopt the best practices of nature education as has been highlighted in the development of local “nature kindergartens” and is now being applied to whole school settings.



Lenny Ross is a teacher at Strawberry Vale Elementary School in Greater Victoria. He has an MA in Environmental and Aboriginal Education from the University of Victoria, and has created several award-winning eco-educational programs.

10:15–10:30 amCoffee Break (*Dining Hall*)

10:30–11:15 am**Concurrent session A**

1. Learning Resources for a Blue Planet

Alex King, Kelly Nordin, and Heather Murray

Looking for some water-based lessons to use in your classroom? Join HCTF Education for an introduction to some of our most popular water, watershed and wetland resources and programs, including Project WET and the Wonders of Wetlands. Explore hands-on activities that will inspire student inquiry and learning outdoors and get you started with place-based instructional strategies that support the new BC curriculum. Learn more about our GO Grants for field trips and Wild School program and leave with some new ideas that will spark curiosity and wonder about our special aquatic places! **{WATERSHEDS}**

Academic Building – Biology Lab; (90-minute session: continued through Session B)

2. Incorporating First People’s Principles and Digital Storytelling

Yvonne Dawydiak and Mary Holmes

Bring your own device (and we’ll have a couple of iPads on hand) for this hands-on workshop. We’ll explore the potential of connecting Digital Storytelling with the Science Curriculum to give voice to student’s stories and to honour the First People’s Principles of learning. During the workshop, we’ll work in small groups to create stories with an Ocean Theme to connect with Sc’ianew (Cheanuh First Nation) traditional lands on which Pearson College stands. Our digital stories will be available online after the conference. **{PLACE}**

Floating Building – Marine Science Lab; (90-minute session: continued through Session B)

10:30–11:15 am **Concurrent session A, continued**

3. Get your Hands Wet: A Workshop for Marine Educators

Reed Osler

Join this interactive outdoor workshop to gain tips and tricks that will engage your students or program participants in ocean literacy. Gain hands-on program ideas and activities for all ages to take back to your site or outdoor classroom. Have fun, get ocean literate and increase your ability to connect people to the marine world. {**LITERACY**}

Floating Dock (outdoors)

4. Connecting People to their Watersheds using Real World Examples

Nicole Gilmore and Jennifer Whipple

Come learn about how Taylor Shellfish Farms' education program gets folks involved in their watersheds by learning about shellfish and shellfish farming via class visits, public presentations, events, seed sales and lots more! {**WATERSHEDS**}

Academic Building – Chemistry Lab

5. Nuuciq Spirit Camp: Weaving Environmental Education and Traditional Ecological Knowledge in Alaska

Kay Shoemaker

Nuuciq Spirit Camp, held on a remote rural island at an ancient village site in Prince William Sound, offers Alaska Native families two weeks of experiencing place-based Traditional Ecological Knowledge (TEK) and environmental education. Elders offer traditional skin-on-frame kayak construction, seal hunting, medicinal plant salve making, carving, and dance alongside marine biology, wetland, and forest ecology lessons led by visiting environmental educators. Learn games and camp strategies to use TEK and environmental education in nearly any setting with children who like to explore their cultural traditions alongside outdoor adventures! {**PLACE**}

Director's Lawn (outdoors)

11:30 am–12:15 pm ... **Concurrent Session B**

1. Learning Resources for a Blue Planet (Continued from Session A)

2. Incorporating First People's Principles and Digital Storytelling (Continued from Session A)

3. Get your Hands Wet: A Workshop for Marine Educators (Continued from Session A)

4. Aliens Amongst Us—Dissect a large squid and learn about the biology, evolution and mythology of Octopus, Squids, and other Cephalopods

Orlay Johnson and Janice Mathisen

Cut up a squid and see what an evolution's "first" try might look like (blue blood, 3 hearts, and a esophagus that runs through the brain). One way to introduce these aliens is by dissection of a large Humboldt-sized squid. These creatures are cheaply available at Asian markets, dissection tools can be blunt, clean up is easy, and it truly is a alien species whose evolution is both vastly different and remarkably similar to humans. Plus, at the end, we can write a greeting to your loved ones in squid ink or maybe even cook up some calamari. {**LITERACY**}

Academic Building – Chemistry Lab

Monday, August 15, Continued

11:30 am–12:15 pm ...**Concurrent Session B, Continued**

5. Pacific Northwest Tides

Cindy Bryden

An interactive student demo in which tidal forces are explained using simple readily available tools. With the use of a hula hoop and beach balls students can participate as celestial objects in a lunar cycle. All 7 ocean literacy principles are relevant depending on depth level of understanding. Music is applied to reinforce safety guidelines with coastal PNW Tidal exploration. **{LITERACY}**

Academic Building – Math Classroom

12:00–1:00 pmLunch (*Dining Hall*)

1:15–2:00 pm**Concurrent session C**

1. Aquatic Invasive Species: A Hands-on Approach

Sue Staniforth

Invasive species are a serious issue world-wide, representing the second greatest threat to global biodiversity after habitat loss, and costing governments and communities tens of millions of dollars in control efforts. Sue will review a variety of educational strategies, hands-on activities and fieldwork planning tools that support students in tackling invasive species in their communities, with a special focus on a new aquatic invasive species curriculum resource. **{WATERSHEDS}**

Academic Building – Biology Lab; (90-minute session: continued through Session D)

2. Pulling Together for Ocean Literacy in Canada and Beyond

Anne Stewart

Strand: Ocean Literacy

The Canadian Network for Ocean Education (CaNOE) is working across Canada and globally to advance Ocean Literacy. Find out what is happening, share good practices and help shape the future of ocean literacy movement. **{LITERACY}**

Floating Building – Marine Sciences Classroom; (90-minute session: continued through Session D)

3. Knowing Home: Braiding Indigenous Science with Western Science

Gloria Snively

In most science classrooms Western Science has been taught at the expense of Indigenous Science. This presentation explores definitions of science and principles of Aboriginal education. Attention is given to Northwest Coast examples of Indigenous people's contributions to science, environmental understanding and sustainability. Curricular connections include the seasons, plants & animals, weather, simple machines, light & sound, climate change, and sustainability. **{PLACE}**

Academic Building – Chemistry Lab

1:15–2:00 pm **Concurrent session C, Continued**

4. Fitting Environmental Education in Crowded Elementary Classroom Schedules

Wendelin Dunlap

First I will review components of the Aquatic Invasive Species games I developed for use during recess and physical education. Then I will encourage some attendees to participate in the various games so we can experience playing and learning. Finally I will bring us back together for a Q&A wrap up of the group's experiences. **{LITERACY}**

Academic Building – Math Classroom

5. This is Your Brain on Water: Senses of Place and Placelessness

Marilyn Sigman

Strand: Connecting to Place: Environmental Education and Indigenous Sciences

Novelty plays a role in capturing attention and emotional or values connections add to the “stickiness” of learning experiences in memory. We will explore how these concepts from brain and learning science can be applied in culturally-responsive approaches to design watery educational experiences – both to develop a “sense of place” and to provide opportunities for “oceanic” feelings of “placelessness.” **{PLACE}**

Floating Building – Philosophy Classroom

2:15 pm–3:00 pm **Concurrent session D**

1. Aquatic Invasive Species: A Hands-on Approach (Continued from Session C)

2. Pulling Together for Ocean Literacy in Canada and Beyond (Cont'd from Session C)

3. Place-Based Learning in the new BC Curriculum

Lenny Ross

Place-Based Learning creates meaningful, real world, and personalized learning experiences that engage students in the inquiry process. The new BC Science Curriculum establishes a strong rationale for connecting children to their sense of place through repeated and significant interactions with nature. Learn how teachers at the Strawberry Vale Nature Based School implement this curriculum. **{PLACE}**

Academic Building – Chemistry Lab

4. Romance, Violence, and Ocean Literacy

Richard Kool

This presentation will propose that educators have roles in fostering a romantic relationship with environments in order to encourage a sense of caring for biodiversity. We also need to understand the violence our cultures inflict on the natural world and help mobilize a sense of both individual and collective agency towards a reduction of environmental violence. **{LITERACY}**

Floating Building – Philosophy Classroom

Monday, August 15, Continued

2:15 pm–3:00 pm **Concurrent session D, Continued**

5. Indigenizing College Marine Biology

Annette Dehalt

In alignment with Camosun College's Indigenization Initiative, various aspects of TEKW have been incorporated into a recently developed Introductory Marine Biology course: ways of knowing, learning and relating respectfully with Nature, cultural uses of marine life, visits with indigenous knowledge keepers, and an oral circle-seminar leaning on the holistic medicine wheel concept of four directions: physical, mental, emotional and spiritual. **{PLACE}**

Academic Building – Math Classroom

3:00–3:30 pm Coffee Break/SeaFaire and Poster Session set up (*Dining Hall*)

3:30–5:30 pm SeaFaire/Poster Session & Mingle (*Dining Hall*)

5:30–6:30 pm Dinner (*Dining Hall*)

Evening Social and music time: free time to continue browsing the SeaFaire, and enjoy the facilities at Pearson, including the pool!

Tuesday, August 16

7:00–8:00 am Breakfast (*Dining Hall*)

8:00–8:45 am Registration (*Dining Hall Atrium*)

9:00–10:00 am Keynote Speaker: **Eileen van der Flier Keller** (*Max Bell Theatre*)

The Ocean in the Anthropocene

Humans and our activities are changing not only the Earth's land surface, but freshwater, the atmosphere and also the ocean. We are now the main cause of environmental change globally. This has led scientists to propose a new division of geological time – the 'Anthropocene', to recognise this recent human impact on our planet. How is the ocean changing in the Anthropocene? Some scientists suggest that global warming is really ocean warming. From warming, sea level change, ocean acidification, oxygen-poor dead zones, and changes in ocean circulation, it is important that we understand how our actions are influencing the ocean as well as how the ocean influences us.



Eileen van der Flier Keller is an earth scientist in the School of Earth and Ocean Sciences at UVic. She has written several nature guides and resources, and has been widely recognized for her dedication to making earth science engaging and accessible, especially to K-12 school children and their teachers, and recently moved to SFU to begin a new chapter as Teaching Professor in the Earth Sciences Department and Special Advisor to the Dean of Science - Public Education and Outreach.

10:30 am Field Trips (various)

5:30–6:30 pm Dinner is served (*Dining Hall*)

Tuesday, August 16, Continued

6:30 pmGuest Speaker: **Graeme Burgan**, “*Celebrating Biyardin*” (Max Bell Theatre)
Education and Interpretation Ranger, Phillip Island Nature Parks

Aboriginal cultural values, unique wildlife and the arts come together to explore connections to nature. Vast oceans separate us but a migrating seabird can show us all how we are really connected. Elements of the annual Shearwater Festival are described including Indigenous cultural programs, school education programs, community activities, message and arts program.

Wednesday, August 17

7:00–8:00 amBreakfast (*Dining Hall*)

8:00–8:45 amRegistration Open (*Dining Hall Atrium*)

9:00–10:00 amKeynote Speaker: **Jane Watson** (*Max Bell Theatre*)

Sea Otters – A Very Natural History

Sea otters, prized for their thick fur, were hunted to extinction in BC in a commercial fur trade that started in the late 1700s and lasted until sea otters were protected in the early 20th century. Otters were reintroduced to BC from 1969 to 1972 when 89 Alaskan sea otters were released into Checleset Bay off the northwest coast of Vancouver Island in three translocations. Since their “repatriation”, the Canadian sea otter population has grown and spread. Their return has resulted in dramatic changes to coastal ecosystems, and has not been without controversy. We will explore the biology and ecology of this important, charismatic species—in what is truly a very natural history.

Jane Watson grew up on the BC coast, and has spent more than 25 summers studying sea otters and kelp on the west coast of Vancouver Island. With a B.Sc. from the University of British Columbia and a Ph.D. from the University of California at Santa Cruz, she presently teaches biology at Vancouver Island University.



10:00–10:15 amCoffee Break (*Dining Hall*)

10:15 am–12:00 pm ...**NAME General Meeting** (*Max Bell Theatre*)

12:00–1:00 pmLunch served; NAME Chapter Meetings (*Dining Hall*)

1:15–2:00 pm**Concurrent Session E**

1. Connecting Ocean Science with Indigenous Place-based Knowledge *Jessica Brown and Mercedes McLean*

Ocean Networks Canada is actively building the Ocean Sense education program which embraces diverse perspectives of ocean sciences for grades 6 - 12. Ocean Sense is effective both in making ocean science more relevant to Indigenous students by including place-based knowledge and by promoting cross-cultural learning for non-Indigenous students alike. Join this interactive workshop to add to the conversation of effectively communicating the changes being witnessed in our ocean. {PLACE}

Floating Building – English Classroom; (90-minute session: continued through Session F)

Wednesday, August 17, Continued

1:15–2:00 pm **Concurrent Session E, Continued**

2. Gumboot Garden Tour: The Value of Creatures as Teachers

Dr. Louise Page, Catherine Carolsfeld, and Laura Kravac

Coastal marine invertebrates possess unexpected behaviours and features that help them to survive and flourish. Dr. Louise Page calls from decades of research and teaching experience to share some of these novel adaptations. Participants will discover the value of creatures as teachers through hands-on, multi-disciplinary interactions with local species; and discuss how to extend these ideas to other educational settings.

{LITERACY}

Floating Building – Marine Sciences Lab; (90-minute session: continued through Session F)

3. Stream to Sea—Dive into Watershed Education; Don Lowen

You are invited to dive into DFO’s Stream to Sea Program with this interactive workshop. Learn about the curriculum and resources offered to “help students become aquatic stewards” and how Stream to Sea supports BC’s new curriculum. Don Lowen, DFO Education Coordinators for Southern Vancouver Island, will share ideas and resources to help you explore your local watershed in the class and in the field. Examples of how to strengthen education programs with community partnerships will also be examined. For more information and a sampling of resources go to www.streamtosea.ca and www.aufildeleau.ca. **{WATERSHEDS}**

Academic Building – Biology Lab

4. Understanding Geologic Time and Using Storytelling to Explain the World Around Us: An Interdisciplinary Grade 7/8 Unit Overview

Kim Zumach, Michelle Dixon, and Mikki Reintjes

This unit walks students through geologic time, from 4.6 billion years ago to the present day. To show different ways of knowing and explaining the world around us, the unit interweaves origin stories from various Indigenous cultures with scientific evidence from the fossil record. The unit features hands-on learning activities and uses a variety of media to engage a middle school audience. **{PLACE}**

Academic Building – Math Classroom

2:15–3:00 pm **Concurrent Session F**

1. Connecting Ocean Science with Indigenous Place-based Knowledge

(Continued from Session E)

2. Gumboot Garden Tour: The Value of Creatures as Teachers (Cont’d from Session E)

3. The BIG Picture: The Journey Down the Drain, into the Watershed, & Green Cleaners

Mary Coleman

Understanding the system of wastewater and having a hands-on solution, participants will receive program materials on the basics of wastewater, sewer and septic systems, everyday pollutants, and how to make green cleaning alternatives. Also included is how to adapt the information and make an all-purpose green cleaner activity suitable for adults, school or camp lessons, or event display. **{WATERSHEDS}**

Floating Building – Philosophy Classroom

2:15–3:00 pm **Concurrent Session F, Continued**

4. Connecting to the Coast and Ocean

Joy Tally

The Oregon Coast Education Program provides online coastal education modules for grades 3-12. The materials help students learn about coastal and marine ecosystems, human impacts and solutions, and how science supports understanding of climate change. Participants will engage in selected hands on classroom activities featured in the modules, and will connect learning to outdoor experiences for students. **{LITERACY}**

Academic Building – Math Classroom

3:00–3:15 pm Coffee Break (*Dining Hall*)

3:15–4:00 pm **Concurrent Session G**

1. (re)Learn about the Environment / Diversify and Decolonize the Environment

Kati George-Jim and Denni Clement

(re)Learning the history of Indigenous knowledge and environmentalism from a different perspective is what our goal is. To PPP, environmental education should have a collective and inclusive curriculum that encourages sustainability and Indigenous knowledge. Our presentation highlights experiential learning and ocean stewardship incorporating youth, community members, and elders. We hope to further diversify and decolonize education. **{PLACE}**

Academic Building – Biology Lab; (90-minute session: continued through Session H)

2. Flow: Art Projects that Connect Local Watersheds to Ocean Health

Robi Smith

Learn about three art projects that use trash found in and along a river to make connections between river and ocean health. The projects can be adapted to a variety of audiences and can also be tied to shoreline clean-ups. Step-by-step instructions, templates and material lists will be provided for each project. **{WATERSHEDS}**

Floating Building – English Classroom

3. Strong Nations Publishing – Discover 3 New Books

Terri Mack and Brenda Boreham

Join us as we take you on the journey of a river eco-system in these new books from Strong Nations Publishing. From the Mountains to the Sea is a series of three titles. Each targets the Aboriginal Learning Standards in both science and social studies in Kindergarten - We Live Here, Grade 1 - We Share the Seasons, Grade 2 - We Are a Community. **{PLACE}**

Floating Building – Philosophy Classroom

4. Nature Journalling

Anne Lei-Yeung So

Spend time out in nature while journalling your experience. Complete a little booklet of your own words or sketches to record your memories, document information, and to begin new inquiries. **{LITERACY}**

Director's Lawn (outdoors)

Wednesday, August 17, Continued

4:15–5:00 pm ***Concurrent Session H***

1. (re)Learn about the Environment/Diversify and Decolonize the Environment (Continued from Session G)

2. Including Multiple Narratives in a Nature Kindergarten Enid Elliot

Taking children outside is not a simple act. Beyond the four walls of the classroom are multiple narratives and relationships. I have been researching the Nature Kindergarten in Sooke for four years now. Children learn to appreciate the different stories, biological, social and Indigenous, that are found there. How do we honour the narratives, relationships and understandings that children might find there? How do we provoke and extend our own thinking so that we are open to the diverse perspectives possible in a Nature Kindergarten? **{PLACE}**

Floating Building – Philosophy Classroom

3. How Quiet is the World Ocean? William Hanshumaker

The biological impact of noise pollution in the ocean is a poorly understood. Though noise in the sea has been recorded using hydrophones, biological impacts by human-induced acoustics are difficult to identify without knowing the baseline of natural occurring sound. During 2015, a hydrophone was deployed in the deepest part of the ocean, the Mariana Trench. You now have the opportunity to hear and compare the sounds that permeate the world ocean, including rumbles from deep-sea earthquakes, vocalizations of whales, ship prop's cavitation, active military sonar, even the sounds of ice bergs as they crack or scrape across the ocean bottom. **{LITERACY}**

Floating Building – English Classroom

4. Connecting the School to the Stream Jody Watson

A successful collaboration between District of Oak Bay, School District 61, the Bowker Creek Initiative and the Capital Regional District enabled restoration of the section of Bowker Creek through Oak Bay High School in Victoria, British Columbia, Canada. Key restoration objectives were to ensure safe conveyance of flood flows, improve aquatic and riparian habitat, provide accessibility to the creek with trails and a greenway, and create an outdoor classroom and viewing platform. Student and community input was obtained through a design charrette and the students were engaged in many aspects of creek restoration and monitoring. An outdoor classroom, built into the bank of the restored creek, will be used to deliver watershed focussed curriculum developed to give students experiential, creek-side learning on freshwater biology, urban creek hydrology, and the adaptive capacity of waterways, while contributing to the long-term monitoring of the creek. **{WATERSHEDS}**

Floating Building – Marine Science Lab

Wednesday, August 17, Continued

6:00 pm***Awards Banquet, Auction, and Dance!*** (*Dining Hall*)

Get ready for a night of dancing, food, drinks, and of course a silent/live auction! This year's auction will blow others out of the water column! Be ready to bid on items donated from businesses up and down Vancouver Island and the mainland. If you are planning on touring around our beautiful coast once the conference is over, you will have your pick from a number of hotels, seaplane trips, whale watching tours, kayak/paddle board rentals, restaurants, and shops to check out. Not to mention some high end pieces of artwork from local artists.

The ***NAME Awards*** are our chance to honor and recognize the work of NAME members who have put their hearts into aquatic and marine education.

The ***NAME Auction*** is always a conference highlight; the live auction raises funds for NAME's mini-grant and scholarship programs. Auction items are varied and donated by members and local organizations, you never know what will be on the table!

Our DJ, Hjalmer Wenstob has the artbeat to make your heart beat. A performer since childhood, Hjalmer knows how to raise a pole and raise a party! Move to the tunes of this bruin of a man. His musicality is only surpassed by his awesome art and big heart.

Thursday, August 18

7:00–8:00 amBreakfast is served (*Dining Hall*)

9:00–9:30 amClosing Ceremony (*Dining Hall*)



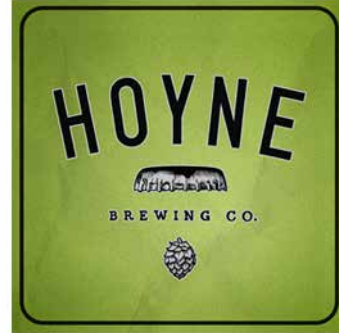
Conference Sponsors: Jellyfish

These great organizations have provided us with donations for our auction in order to support NAME mini-grants and scholarships. We thank them for their support!



Conference Sponsors: Seastar

We would like to thank the following sponsors for helping make this year's conference a success. We value their support of marine and aquatic education!





NAME

NORTHWEST AQUATIC & MARINE EDUCATORS

See you next year in Homer, Alaska!



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