Healing and Protection of Our Homelands through Culture, Education, & Science

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Master of Science in Science Teaching • Portland State University • Cumulative GPA: 3.93 /4.0
Bachelor of Science in Chemistry • Northern Arizona University • Cumulative GPA: 3.47 /4.0

Professional Experience

Northwest Indian College – Nez Perce Site; Lapwai, Idaho — Native Environmental Science Faculty, January 2019 – present

Full-time faculty position include teaching, student advising, community engagement and networking, internship supervision and recruitment, with acknowledging and supporting the cultural perspective of the students, using a variety of methods to convey necessary knowledge and skills and to promote student success. Instruction is the primary focus of this position, with 10 – 15 hours of instruction quarterly, course design and development, participation in research, all with objectives in supporting student success in the B.S. in Native Environmental Science (NES) degree program. Building capacity at the Nez Perce Site for high quality, culturally-relevant, place and community-based education in environmental science through collaborative efforts is essential to student success, including developing partnerships with local institutions (Lewis-Clark State College, University of Idaho, Washington State University, and Walla Walla Community College). Providing guidance for students in their academic endeavors and career pathways are part of the authentic mentoring provided by NES Faculty.

Rising Voices, National Center for Atmospheric Research and the University Corporation for Atmospheric Research Boulder, CO — Planning Committee Member Summer 2019 – present

Facilitate intercultural, relational-based approaches for understanding and adapting to extreme weather and climate events, climate variability and climate change. The program brings Indigenous and other scientific professionals, tribal and community leaders, environmental and communication experts, students, educators, and artists from around the world, to assess critical community needs and to pursue joint research aimed at developing optimal plans for community action towards sustainability. Rising Voices acknowledges the inherent value of Indigenous knowledge systems and Indigenous science, adaptive practices and processes, honoring them equally with Earth sciences. Planning the annual workshop series, knowledge exchanges, and trainings facilitates the creation of new and continued intercultural adaptation partnerships based on respect, justice, equality, and reciprocity that address our changing climate.

January 2019 – present	**Region 10 Tribal Operations Committee: Youth Track Program Coordinator**, *Environmental Protection Agency*
February 2018 – present	**Traditional Ecological Knowledge and STEM Educator**, *Confluence Project*
March 2018 – present	**Traditional Knowledge Scholar,** *National Institutes of Health Summer Program for Yakama Students and Roots to Wings Program*
Spring 2015 – Spring 2019	**National Science Foundation (NSF) Graduate Research Fellow**, *Portland State University*
Summer 2017, 2019	**PACE- Mathematics Camp Instructor**, *Nez Perce Tribe*
February 2018 – December 2018	**Tribal Salmon Camp Coordinator**, *Columbia River Inter-Tribal Fish Commission*
January 2018 – May 2018	**National Science Foundation Greater Research Intern,** *United States Geological Survey Glacier National Park*
Summer 2018	**Research Development and Cultural Knowledge Instructor**, *Salish Kootenai College*
Fall 2018- present	**Nez Perce Tribe General Council Resolutions Committee,**
2016	**SHIFT Emerging Leaders Program 2016 Inaugural Cohort**
2015 – 2016	**Oregon LEAD Cohort**, *Coalition of Communities of Color*
January 2015 – September 2016	**Program Development and Coordinator**, *Wisdom Workforce Development, LLC*

January 2015 – September 2016	**Curriculum Developer/Educator**, *Wisdom of the Elders, Inc.*
October 2012 – November 2014	**National Student Representative,** *American Indian Science and Engineering Society (AISES)*
October 2013 – October 2014	**Water Resource Specialist,** *Nez Perce Tribe*
May 2013 – September 2013	**Wetlands Field Assistant**, *Nez Perce Tribe*
September 2012 – May 2013	**Program Staff and STEM Club/ Camp Instructor**, *Arizona Science Center*
March 2010 – March 2012	**Region 3 Student Representative**, *American Indian Science and Engineering Society (AISES)*
2010 – 2012	**Environmental Protection Agency Greater Research Opportunities Fellow,** *Northern Arizona University*
July 2008 – May 2012	**Hanford Technical Intern**, *Nez Perce Tribe Environmental Restoration and Waste Management*
May 2011 – August 2011	**Helicopter Monitoring Program Summer Intern,** *Environmental Protection Agency*
2008 – 2010	**National Science Foundation Undergraduate Mentoring in Environmental Biology Fellow,** *Northern Arizona University*
July 2007 – 2010	**Preparing for Academic Excellence (PACE) Camp College Counselor/Mentor,** *Nez Perce Tribe*
September 2007 – May 2010	**Nez Perce Tribe Air Quality Intern,** *Institute for Tribal Environmental Professionals*
May – August 2008	**Environmental Education Outreach Program,** *Institute for Tribal Environmental Professionals*

RESEARCH EXPERIENCE

2020: At NWIC -Nez Perce Site where our mission states "Through education, Northwest Indian College promotes Indigenous self-determination and knowledge." "We are committed to our students, the Tribes we serve, and advancing Tribal sovereignty for the protection and enhancement of our homelands and future generations." The Indigenous Speaker Series features dialogues about Indigenous people's cultural and traditional lived experiences. We utilize the Tribal Participatory Research (TPR) approach and traditional knowledge as a collaboration tool for adaptation to climate, promoting sustainability, and empowering resilience. Utilizing a traditional leadership approach, the funding has hosted multiple community conversations with multi-generational Indigenous peoples. Speakers have varying backgrounds and share their cultural, traditional, and academic lived experiences in modern society while honoring their longstanding relationship and responsibility to their homelands, communities, and ancestors. Research is living and developing through the conversations among the presenters, participants, and facilitators. The series has drawn in over 800 participants from across the world to engage in discussion about traditional food sovereignty, cultural and traditional practices, human health with foundations in sustainability, resilience, and dedication to future generations.

2016 – 2019: The Nature of Science (NOS) and traditional ecological knowledge (TEK) have commonalities in the knowledge bases: they are both ways of explaining the natural world; founded on a set of practices and the historical accumulation of knowledge; and part of the education is learning practices and developing knowledge of the concepts that are foundational to the disciplines. Throughout the United States, schools are attempting to strengthen students' understanding of NOS through various approaches, although few have adopted the integration of TEK into curriculum. This research assesses two summer camps for middle school students that are science focused, one with TEK integration and one with minimal TEK integration. Pre- and post- surveys and student work samples were analyzed to determine the impact of TEK integration on students' understanding of some of the NOS concepts. A significant increase was observed in the camp that integrated TEK, while no change was observed in students' understanding of NOS in the camp that had minimal TEK integration.

2007 – 2012: Investigating a naturally occurring, metal-chelating biosurfactant, rhamnolipid, and heavy metals (specifically lead and uranium oxides), aiming to quantifying the effect of rhamnolipid presence on the solubility of the heavy metals and gain an understanding on the prospective application for bioremediation. Extensive utilization of the Inductively Coupled Plasma- Mass Spectrometer and handling of high purity and radioactive chemicals.