

**Cognate Proposal - Restorying the Landscape: An Arts-based Approach to Habitat
Restoration on a School Campus**

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Introduction

It's not just the land that's broken, but more importantly, our relationship to land... we can't meaningfully proceed with healing, with restoration, without "re-story-ation." In other words, our relationship with land cannot heal until we hear its stories. But who will tell them?

--Robin Wall Kimmerer, *Braiding Sweetgrass*

This project is an arts-based participatory action study of children's creative connection to a bird and pollinator garden on their school grounds. Fourth grade student-researchers will be "story-trackers" as they gather data in the form of drawings and paintings related to plants and animals in the garden. Narrative elements from local indigenous mythology will be presented to students as a conceptual basis for creating imagery. Students will synthesize the images into multi-modal digital narratives which will be uploaded to informational signage in the garden. In this way they will "plant" their stories for growth and propagation. The study is designed to take up Kimmerer's call to action; to uncover the stories of the land in the hope of creating a path forward for restoration of not only the flora and fauna displaced by human disturbance, but for the creative and emotional bond between children and nature.

In my current work as the developer and teacher of an elementary school arts-based eco-literacy program, one of my projects has been to guide students in the restoration of a native bird and pollinator garden on the school's campus. This project will add another layer of understanding to the process of restoration as they "re-story" with artwork that answers the question, *what stories does the landscape tell?* Because my practices as a visual artist and art educator are so deeply informed by the natural world, my research questions have consistently focused on environmental inquiry in the field of art education. This interest developed during my career as an art teacher where I encountered not only a culture of test-focusedness in the days of

No Child Left Behind, but an almost total separation from the outdoors during the school day. A turning point was when I brought my tough-as-nails students from the south side of Chicago to a nature preserve and noticed that they suddenly seemed to become children again, as the stresses of inner city life faded into wonder. Since then, I have come to believe fully in the importance of creating connections between children and nature through art education and this has been the focus of my graduate work at Sonoma State.

As a perceptual landscape painter I have explored the relationship between visual perception and cognition in the form of sensation, understanding and memory. Particularly inspired by the work of Paul Cezanne, I consider my paintings to reflect my perceptual experience with a landscape, as if it were a text or story. While the pursuit of narrative through perception has provided me with a conceptual framework for my paintings, the reality is that I am still searching for an understanding of not only how to find stories in the landscape, but also how to visually tell them. Therefore this research will apply new understandings to my teaching practice as well as my painting practice.

Research Aims and Goals

The overarching goal of this project is to demonstrate a visual arts-based approach to outdoor environmental learning that encourages a regenerative connection between children and the local ecology. Within this, the study aims to generate and collect art-based data in response to the following research questions: **How can we find stories in the landscape? What stories does the landscape tell?** By engaging fourth grade students as arts-based participatory researchers in a habitat restoration project on their school campus, I hope to inspire the students to become empowered to find and share their own stories in the landscape.

Literature Review

The disconnect between children and the natural environment has long been of concern to educators (Dewey, 1898; Leopold, 1949; Sobel, 1996; Louv, 2006) and continues to widen as digital media become more central to childrens' learning and recreation. (Van Boeckel, 2013; Wiederhold, 2020; Velde et al., 2021). There is a growing collection of evidence that connecting with natural ecosystems in outdoor settings improves children's emotional well-being and supports learning in the classroom (Fjortoft, 2004; Charles, 2009; Chawla, 2020).

The practice known as eco-art education (Inwood, 2018) or arts-based environmental education (Van Boeckel, 2013) can present a model for engaging children with the natural landscape. The interdisciplinary connection between art education and ecological learning draws on the eco art movement of the 1960s and 1970s which sought to deepen the social relevance of art pedagogy by engaging with environmental issues (Lankford, 1997; Jagodinsky, 2008; Inwood, 2018; Van Boeckel, 2013). Situated within this discipline, hereto referred to as arts-based environmental education, is the practice known as place-based education, which emphasizes the importance of learning about local ecosystems through the arts (Gruenewald, 2003, Graham, 2007; Blandy et. al. 1998). Much of recent literature proves the efficacy of arts-based environmental education programs in establishing empathy and caring for the environment (Grey et al. , 2015; Capra, 2005, Bertling, 2015) Additional overlaps exist between art education and environmental justice curricula (Bowers, 2002; Creel, 2005; Sommerville, 2013).

As the climate crisis continues, arts-based environmental education can contribute to a societal shift away from the resource extraction/consumption model and contribute to a new land

ethic (Capra, 2005 Orr, 1992, Graham 2007). Anderson and Guyas (2012) propose that as the traditional shapers of cultural attitudes, artists and by extension, art educators are positioned to develop new metaphors which reflect the experience of all species in an interconnected system.

French phenomenologist Michel de Certeau (1984) aligns metaphors to spatial stories based on the Greek word for bus, *metaphorai*. As such, metaphors in the form of stories have the power to activate places and give them meaning. Visual images can reflect a dialogue between artist and landscape in which the landscape expresses a narrative (Woolery) Such an ability to perceive stories in the natural world can be further understood through the indigenous practice of reading the landscape like a “sacred text” (Sarris, 2021).

Another arts-based approach to reframing environmental attitudes can be found in the practice of drawing in the landscape, through which knowledge becomes embodied by the physical act of mark making (Sousanis, 2015; Woolery, 2016). A phenomenological outlook explains that knowledge is constructed through perception, as is illustrated by Cezanne’s statement that “the landscape speaks itself in me” (Ponty, 1945). Also of importance is the idea that perception is fluid, multidimensional, imaginative and fundamental to cognition (Van Boeckel, 2013; Ponty, 1945; Sousanis).

Van Boeckel (2013) describes art as our “antennae to the world,” through the “skillful and heartfelt use of the senses to articulate the full range of one's experience of the environment” (p.68) which extends to both metaphorical and literal knowing. This project seeks to establish a dialogue between the students and the landscape, wherein visual perception expands into multiple ways of understanding, allowing the students to generate metaphors in the form of multi-modal narratives.

Rationale

Schools are in an optimal position to bridge the divide between children and nature by creating meaningful outdoor learning experiences in unused areas on school campuses. Despite the growing collection of evidence that connection with natural ecosystems in outdoor settings improves children's emotional well-being and supports learning in the classroom, there is a lack of documentation of best practices for outdoor ecological learning, especially at the elementary level.

As we experience increasing climate related disasters, as well as the decline and extinction of many wild species, arts-based environmental pedagogy can encourage the recontextualization of environmental attitudes through the creation of new metaphors. Metaphors can be understood as spatial stories that activate places through cultural and imaginative associations

This study is intended to explore ways of developing deeper levels of ecological understanding within the context of an ongoing bird and pollinator restoration project. Drawing on indigenous traditions of "reading the landscape" this project engages children as co-researchers or "story-trackers" in a bird and pollinator habitat restoration project on the campus of McNear Elementary School in Petaluma, CA .

Methods

This study uses an arts-based participatory action research methodology. Arts-based research can access information that is unmeasurable by more traditional forms of research (Eisner, 1997; Levy, 2017). By treating art forms as data, arts-based research brings forth that which is non observable and idiosyncratic (Eisner, 1981) as well as that which is imagined or transcends the limits of language and measurement (Muir, 2020). Artworks can be considered the primary data source or can complement conventional research methods for mixed method approaches (Muir, 2020; Levy, 2017). Arts-based participatory action research presents opportunities for the co-construction of knowledge in underrepresented communities (such as children) and can provide insight through artworks which express a variety of perceptions, emotions and cultural values (Rathwell and Armitage, 2016; Ayala, 2016; Jokela, et al., 2015; Lopez et al., 2018).

Arts Based Perceptual Ecology (ABPE) is a research methodology developed by artist/biologist, Dr. Lee Ann Woolery for studying environmental issues and is well suited to this study. ABPE is a methodology for addressing a research question according to strict and replicable protocols, which I learned in a 6 week training course with Dr Woolery in the Fall of 2022. She described ABPE as the process of collecting data through visual imagery and mark making in response to direct experiences in the landscape, apart from any preconceptions of what the finished product will be. In this way the researcher is the instrument and the data reflects the researcher's sensory experience. The research protocols provide a framework for seeing more than what is simply visible, by connecting what is seen to what is perceived on a subconscious, intuitive, imaginative level. Through this process, a language of place can be developed which documents the stories of the land (Woolery 2021).

ABPE Protocols will include sound mapping, graphic facsimiles and perceptual drawing and paintings. Indigenous myths relating to particular flora and fauna will be also presented as prompts for the investigation of elements of the habitat garden. (Sarris, Meriam) Data collected in field journals will be composed by student-researchers into multimodal digital images and uploaded to a website which will be linked by qr code to signage in the garden. Some images will be reproduced on ceramic tiles which will be included in a mosaic in the garden

Participants

Two classes of fourth-grade students will participate in the study as part of their regular bi-monthly garden/environmental literacy classes which are taught by myself, hereby referred to as the teacher -researcher and attended by their classroom teachers. The students, hereby referred to as student-researchers, have been working with the teacher-researcher on the planting and tending of native plants in the schoolyard habitat garden since the beginning of the current school year. The teacher -researcher will engage student-researchers in an arts-based participatory action research methodology to gather data in the habitat garden through arts-based perceptual ecology research protocols. Student -researchers will act as “story trackers” to collect data in the form of drawings and paintings which will be compiled by student-researchers into digital visual narratives (cartoon, illustrated story) to be displayed on a website linked to the signage in the garden.

Timeline

March/April 2023 Phase 1 - data collection by student researchers under the direction of teacher-researcher

April/May 2023 Phase 2 - synthesis/analysis of data by student researchers

Phase 1 Data Collection Story Trackers	Protocol	Activity
Sounds in the Garden	Sound Mapping	
Weather Paintings	Visual Facsimile- Watercolor	
Rewilding	drawing	
<p>What stories does the land tell? How do we find stories in the landscape? Students are story trackers -</p> <p>Collect fragments of story through pictures</p> <p>How do we find stories in the habitat garden? What tools do we need?</p>	<p>Writing/Drawing'</p> <p>Story Tracker skill Questions</p>	<p>Questions and Answer Woman Sarris /Hummingbird (Meriam)</p>
2. Bird stories/ population decline/habitat loss	<p>Story Tracker skill: Dialog If the landscape were speaking through you, what would it say? What would the birds say, what Would the trees say.</p>	<p>Slideshow Cartooning</p>
Insects Pollinators	<p>Visual Facsimile Story tracker skill Action /Movement (Laws)</p>	<p>Centipede, Beetle, Bumblebee (Sarris) Under the log In the air</p>
Plants	<p>Shadow Drawings Storytracker skill Change</p>	<p>Elderberry (Meriam)</p>
Reptiles/Amphibians		

Phase 2 Synthesis/analysis of data into (digital) visual narrative by student researchers		
Upload images to google slides		
Add text		
Phase 3 Analysis of visual narratives.		

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