

# ***Expanding the Capacity of Outdoor Science Programs to Measure Meaningful Outcomes***

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# Introduction

Our project, *Expanding the Capacity of Outdoor Science Programs to Measure Meaningful Outcomes*, is a collaboration among a UC Berkeley-based team and three outdoor science programs and their communities.

Our project was designed to be **community-centered**.

Community-centered research can support:

- **more equitable, inclusive, and just research practices**
- **insights that dominant ways of thinking have marginalized or failed to notice or value**
- **research that is more meaningful and useful to the communities it intends to support**



In partnership with our three partner organizations, we have been reflecting on how to **think more inclusively and holistically about outdoor learning outcomes**

We aim to understand:

- 1) What outcomes are most meaningful to community members?
- 2) How could research and evaluation capture data on these outcomes through practices that are humanizing, informative, and feasible?

# Approach

Partner organizations assembled members of their communities (educators, leaders, and broader community members) to form a **community research network (CRN)**.

The CRN have come together to **share their expertise** gained through their own experiences in outdoor learning.

Through these collective conversations, we have begun an **iterative process** of identifying meaningful outcomes, operationalizing our outcomes, and co-designing data collection tools.

A key component of our community-centered approach has been **storytelling**.

Storytelling has served as a way to:

- (1) **build community** and shared understanding
- (2) Elevate **unheard or marginalized perspectives**
- (3) **generate research ideas** and operational definitions.

# Community-Building



*What has been your relationship with the outdoors?*

*Think of one outcome that really resonates with you:*

*Why does this outcome speak to you?*

*Was it based on something you experienced, or wish you had experienced?*



# Stories for Research Data

Stories also allowed the CRN to coalesce around **3 “orientations”** and **5 key outcomes** of value to their communities:

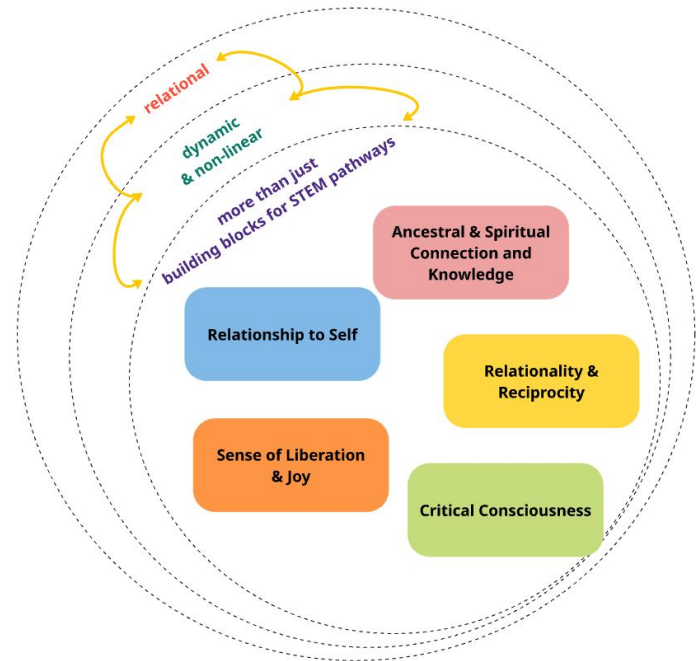


Image description: The framework that resulted from the CRN discussions, summarized in a nested circle visual. There are 3 nested circles representing the framework “Outdoor/nature-based learning is...” The largest circle is labeled “relational,” the middle circle is “dynamic and nonlinear,” and the innermost circle is “more than just building blocks for STEM pathways.” The circles are made with dotted rather than solid lines and the labels have arrows pointing to each other, representing these labels are not hierarchical but all influence or connect to each other. In the center of the innermost circle are 5 outcomes: relationship to self, sense of liberation and joy, ancestral and spiritual connection and knowledge, relationality and reciprocity, and critical consciousness.

# Outdoor Learning Outcomes

<b>Relationship to Self</b>	<i>Self-discovery and cultivating a sense of self-awareness and self-worth.</i>
<b>Relationality and Reciprocity</b>	<i>Ability to acknowledge and appreciate how we are in community and relation with others (humans &amp; non-humans), how nature and our communities sustain us, and how we have a reciprocal role to play in sustaining them.</i>
<b>Ancestral and Spiritual Connection and Knowledge</b>	<i>Learning about one's own (and others') ancestral history and practices and cultivate a spiritual connection to the land.</i>
<b>Sense of Liberation and Joy</b>	<i>Feeling exhilaration and a sense of freedom to show up authentically and engage as themselves in the outdoors, often directly disrupting/resisting internalized/imposed expectations about how to engage in the outdoors and in human-made spaces</i>
<b>Critical Consciousness</b>	<i>Learning about the histories of lands, communities, &amp; peoples, &amp; building understandings on inequities in relation to systems of power, as a means to empowering people to advocate for self &amp; community.</i>

# Outdoor Learning Orientations

Outdoor and nature-based learning is...

<b>Relational</b>	<i>A group's experience in the outdoors is influenced by who is in the group, the perspectives they bring, and the relationships they hold with each other.</i>
<b>Dynamic and Nonlinear</b>	<i>Over time and across contexts, how we think and feel varies and/or evolves. These constantly changing dynamics of experience mean that outcomes are not fixed states and don't always grow in a linear progression.</i>
<b>More than just a building block for STEM pathways</b>	<i>The outdoors and nature are not just a “gateway” for STEM. Engaging in the outdoors and nature is meaningful in itself, and can build relationships with oneself, interpersonal relationships, a sense of empowerment, and leadership.</i>

# What's Next

- Currently holding discussions and working group sessions with the CRN to co-create a suite of measurement tools that align with our values and community priorities
- Measure the impact of outdoor science and environmental learning (OSEL) experiences on the identified outcomes using these newly developed tools

The work will contribute to existing bodies of literature on the benefits of outdoor learning and will produce measurement tools that can be used across a range of outdoor and nature-based learning experiences.



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# Thank you!

