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Listening to Children: Perceptions of Nature and Biophilia at Mountain School

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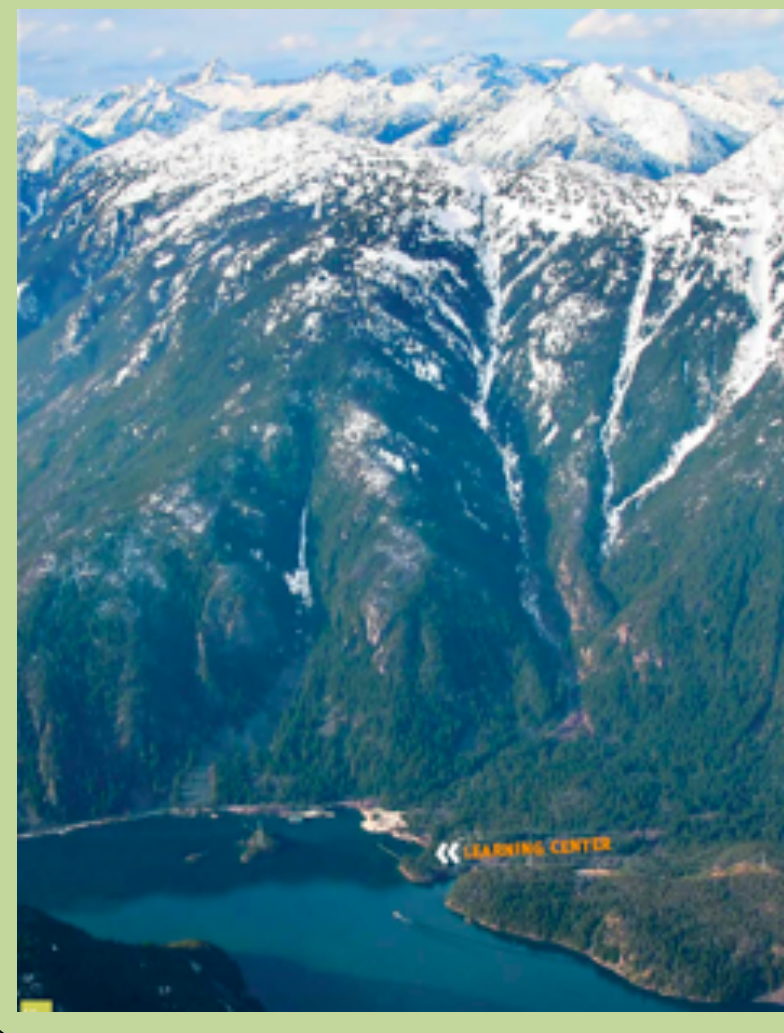
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Listening to Children: Perceptions of Nature

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Background

Partners

Western Washington University
North Cascades Institute

Focus

This exploratory study investigates children's perceptions and experiences of nature during a residential outdoor environmental education program and contributes to an understanding of how nature experiences arouse biophilia, a love of life and all living things.



How can we promote a responsible attitude and caring view of the earth and its inhabitants among young people?

Limited research suggests that contact with the natural world, especially during middle childhood, occupies a surprisingly important place in a child's emotional responsiveness and receptivity. (Derr 2001, Kellert, 1985, 1996)

Research Questions

1. What are children's perceptions and experiences in nature?
2. What types of experiences with nature support the development of biophilia in children?



Research Context

Two grade 5 classes from an urban school participate in three-day wilderness-based residential environmental education program.

Research Design

Methods

To understand children's responses to nature we conducted interviews, observed children during the program, and collected students' written work.



Data analysis procedures

Transcripts from interviews and the samples of student work were read and reread and coded for the common themes that appeared. Kellert's value categories provided a place to begin our analysis of the data and identification of "dispositions associated with the human inclination to affiliate with the natural world" (Kellert 1996, p. 26).



Our study of children's responses to nature is informed by Kellert's (2002) notion of environmental values in relation to evolutionary biology and biophilia. Kellert (1996) established a typology of nine values that "reflect a range of physical, emotional, and intellectual expressions of the biophilic tendency to associate with nature" (p. 129).



Findings

Children's perceptions of nature changed over the course of their involvement in Mountain School. This change was evident in both their interview responses and written work. We observed an increase in the number of children who expressed scientific-ecological, naturalistic, aesthetic, humanistic, moralistic, and symbolic valuing of nature and a corresponding decrease in the number of children who expressed negativistic views (Table 5.1).

Table 5.1 Range of Children's Expressions of Environmental Values (n=35)

VALUES	Themes & Subthemes	Pre-Program		Day 1-3		Post-Program	
		Interview	Document	Interview	Document	Interview	Document
Scientific-Ecological	Systematic Study	9	3	14	24	15	25
	Observation	22	-	18	35	30	35
	Interconnection	8	2	14	15	15	21
Naturalistic	Exploration	3	1	14	13	15	10
	Play	5	-	10	14	17	11
Symbolic	Poetry	-	-	8	35	-	2
	Story/fantasy	3	-	10	20	21	24
	Anthropomorphism	4	-	12	2	4	2
Aesthetic Appeal	Beauty of Nature	11	2	17	8	19	9
	• animals	14	2	15	7	14	15
	• forest	7	-	-	5	12	8
	• vista/scenery	5	-	10	8	12	8
Humanistic Love	Emotional Attachment	11	-	10	16	22	24
	• relax	12	2	-	1	10	-
	• reflect	3	-	10	-	12	-
	• respect	9	1	12	1	14	-
Negativistic Aversion	Fear/Threat	1	-	-	-	-	-
	• heights	6	-	4	3	2	-
	• weather	6	-	1	-	1	-
	• plants	3	-	-	-	-	-
	• animals	4	-	4	3	1	-
	• predators	7	-	2	2	-	-
	• insects	5	-	2	-	2	-
	• dark	2	-	1	-	1	-
• getting lost	1	-	1	-	1	-	
• people	5	-	-	-	1	-	
Moralistic	Concern	15	1	-	3	21	5
	• ethical treatment	7	1	15	-	16	3
	• etiquette	7	1	-	1	12	1
Utilitarian	Hunter/Gatherer	5	-	1	2	7	-
	Photos	1	-	3	-	4	-
Dominionistic	Suppress nature	-	-	-	-	-	-



Findings

What types of experiences with nature support the development of biophilia in children?

Direct experiences that involve primary contact with nature prompt aesthetic and emotional responses that support and contribute to the development of biophilia in children.

Well it's beautiful and I love all the animals that live there – I can't believe the animals get all that – they have a big beautiful home! During the Silent Hike you could hear sounds and could see squirrels and chipmunks and we got to see that blue bird – I think a blue Steller's Jay.

When I walked over the bridge I saw water and then saw a chipmunk sitting and staring at me – and I say hi. And, I heard a tree frog.

On the Night Hike I saw bats flying above my head catching insects – that was just amazing. I loved that! I never knew bats lived in the mountains." (Carmen, Post-program interview)

Physically demanding and challenging experiences in nature provide a sense of accomplishment that reinforces the positive rewards of aesthetic and emotional experiences. Such experiences enhance and further the development of childhood biophilia.

I like putting my head in the creek under the waterfall. We were so high in the mountains, the sun was almost under us. (Ethan, Conversational interview, Day Two)

Structured reflective experiences that provide the opportunity and time for personal contemplation centered on nature help children strengthen their emotional connection to nature and advance biophilia.

Dear Me, I really enjoyed the Silent Hike just now. My favorite time at Mountain Explorations was when we first made it onto the trail! My favorite trails were the Peninsula Trail and Sourdough Trail, which I am on now. I hope you remember how much fun you had here! The animals are awesome! (Paige, Post Card, Day Three)

Further Research

There is a need to study how children's biophilic expressions can develop through urban nature experiences, such as surveying local wild species or mapping open space and parks in and around urban centers. Also, since studies suggest that the majority of outdoor activity occurs along trails in urban and state parks and in established campgrounds, research into children's biophilic experiences in "front country" or day-use areas is warranted.

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