

Outdoor Environmental Learning

“Nature provides opportunities for cognitive development through education and research about organisms and habitats. The estimated value of nature-based education was based on the 2012 Canadian Nature Survey... we arrived at a total value of approximately \$9.5 million per year.”

**FROM SOUND INVESTMENT: MEASURING THE RETURN ON HOWE SOUND'S ECOSYSTEM ASSETS
(MICHELLE MOLNAR, 2015, DAVID SUZUKI FOUNDATION)**

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What's happening?

Each year, over 22,000 students experience environmental education with Howe Sound as the classroom. The Howe Sound area hosts the largest regional cluster of summer camps, outdoor schools, and environmental programs in British Columbia.¹ Many more, young and old, meet and learn about nature through schools and universities, local community groups, and commercial ecotourism in Howe Sound. This outdoor learning relies on proximity to Vancouver and the diverse geography and ecology that Howe Sound offers.



Squamish Nation canoe at Camp Suzuki. (Photo: Carmen Leung)

Howe Sound's role as a classroom continues to grow. Camp Suzuki, a summer environmental program run by the David Suzuki Foundation and Squamish Nation, had its first season at Camp Fircom on Gambier Island in 2015. West Vancouver School District began a new year-round outdoor program in 2013 at its elementary school on Bowen Island. A boom in ecotourism is also playing a role in environmental education. For example, Sea to Sky Gondola drew about 300,000

visitors in 2014,² its first year of operation. Sea to Sky Gondola employs nature guides and interpretive signage to explain Howe Sound geography, marine biology and First Nations culture at the viewpoints and along its trails. In 2014, Sewell's Marina expanded its Sea Safari boat tours to link with land-based tours of Sea to Sky Gondola, Britannia Mine, and the Sea to Sky Highway.

Why is environmental education important?

According to the United States Environmental Protection Agency (EPA), environmental education is a process that allows individuals to explore environmental issues, engage in problem solving, and take action to improve the environment. As a result, individuals develop a deeper understanding of environmental issues and have the skills to make informed and responsible decisions.³ Between 2001 and 2004 the American Camp Association conducted research with over 5,000 families from 80 camps to determine the outcomes of the camp experience as expressed by parents and children. Parents, camp staff, and children reported significant growth in self-esteem, peer relationships, independence, adventure and exploration, leadership, environmental awareness, friendship skills, values and decisions, social comfort, spirituality.⁴ It's not peer-reviewed research but check it out!



Capilano University students discuss the natural history of the Squamish Estuary. (Photo: Roy Jansen)

What is the current state?

Howe Sound’s diversity of wild spaces yet proximity to metropolitan Vancouver make it an ideal outdoor classroom. In 2015, five outdoor school programs brought over 15,000 elementary and secondary school students to Howe Sound from the Vancouver region and Sea to Sky Corridor (Table 1). Public secondary

and elementary schools in Squamish, Lions Bay, West Vancouver, North Vancouver, Bowen Island, Langdale, and Gibsons, as well as a private school on Bowen Island used their school sites and nearby Howe Sound forests and shores to teach a variety of natural science subjects. Two universities, Qwest University Can-

TABLE 1: OVER 22,000 STUDENTS OF ALL AGES ARE INVOLVED IN ENVIRONMENTAL EDUCATION PROGRAMS IN HOWE SOUND

ORGANIZATION	PROGRAM	ATTENDEES	ANNUAL ENROLLMENT	LOCATION OF OUTDOOR CLASSROOM
Cheakamus Centre	Elementary Outdoor School, Field School, Coast Salish Bighouse; High school leadership	elementary, secondary, teachers	6,700	420 acre ecological reserve, including farm and salmon hatchery, Brackendale
Evans Lake Forest Education Centre		primarily youth, also adults	4,000	33 acre property and 240 acre demonstration forest, Brackendale
Camp Elphinstone Langdale, Sunshine Coast	Beach study, stream study, forest interpretive hike, wild edibles, fire building	mainly grade 7, some secondary students	7,000	Camp Elphinstone property, Langdale, Sunshine Coast
Sea to Sky Outdoor School for Sustainability Education	Spring and fall, 3-4 day outdoor experiential education programs; sustainability education; place-based learning, indigenous history	elementary, secondary	2,000	Camp Elphinstone, Camp Fircom, Halkett Bay Park, Keats Camps
Camp Fircom Gambier Island	Spring and fall; 3 day programs, farm to school table, renewable energy, aquatic life; host for Sea to Sky Outdoor School and Camp Suzuki	elementary, secondary, adult, families	500	120 acre Camp Fircom property and nearby Halkett Bay, Gambier Island
Camp Suzuki	Summer camps; conservation leadership, climate change, Squamish Nation culture and knowledge, sustainable living	children (7-13), young adults (18-30)	150	Camp Fircom, Gambier Island
Bowen Island Community School, Bowen Island	Year round “outside45” program; natural systems, local community, geology, ecology, environmental issues, outdoor skills	elementary	56	Bowen Island, Halkett Bay Park, Sea to Sky corridor
Island Pacific School, Bowen Island	Incorporated in year round science and outdoor recreation teaching; ecosystems, biodiversity, conservation, stewardship	grade 6-9	65	Bowen Island; Halkett Bay, Gambier Island
Metro Vancouver School & Youth Leadership Programs	Strategies and tools to support engagement, understanding, awareness and action for sustainability.	K-12 teachers, students, youth leaders, teacher candidates	1,500+	Occasional activities on Bowen and Gambier islands, Squamish area
Southlands Heritage Farm, Vancouver	Summer camp educational programs; industry on the water, to intertidal life, to first nations use of coastlines	elementary with secondary school volunteers	300	Bowen Island, Camp Elphinstone and Camp Fircom
Qwest University Canada, Squamish	Undergraduate learning and research in biology, marine biology, intertidal life; conservation and restoration; biodiversity	undergraduate students	~400	Squamish River estuary, Qwest University Campus, Porteau Cove, Woodfibre
Capilano University, Squamish, North Vancouver	Natural history course (Squamish campus); Environmental Stewardship class (North Vancouver campus)	undergraduate students	50	Squamish estuary, Porteau Cove, Lighthouse Park, Horseshoe Bay

ada and Capilano University, have campuses in the Squamish area and conduct field-based courses for undergraduate students, principally at Squamish Estuary, Porteau Cove Provincial Park, and Lighthouse Park.

Local community groups are also important environmental educators. Groups such as the Lighthouse Park Preservation Society, Squamish River Watershed Society, Sunshine Coast Naturalists, Friends of Cypress

Park, and Bowen Nature Club conduct interpretive hikes and other outdoor activities for the public throughout the year. Each winter, the Squamish Environmental Society and the Brackendale Art Gallery run the Eagle Watch program and Bald Eagle Festival to help thousands view and learn about the yearly return of eagles to the Squamish area. Cheakamus Centre in the Paradise Valley hosts a community Open House to share outdoor environmental learning with its 2000+ annual visitors.

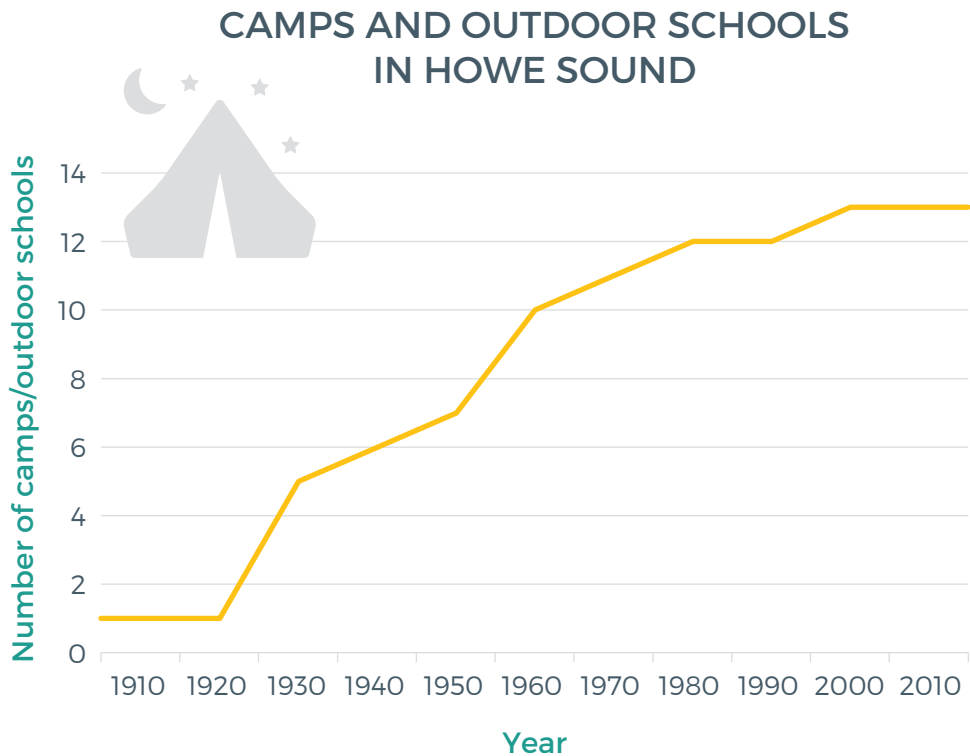


Figure 1. Establishment of camps and outdoor schools in Howe Sound continued steadily through the 20th century.

For over 50 years, Howe Sound has been the site of one of the largest concentrations of summer camps in British Columbia. One camp started operating in 1907! Each decade through the 1990s has seen more camps opening and there are 13 camps and outdoor schools

in the vicinity today (Figure 1). Thousands of youth and adults enroll in outdoor recreational programs at eight camps, primarily during the summer months (Table 2).

“Yet we also recognize that at a time when children are becoming increasingly disconnected from nature, it is of critical importance that as a society, we continue to support and invest in outdoor environmental learning.”

CONOR MCMULLAN, CHEAKAMUS CENTRE



Sea to Sky Outdoor School students studying marine ecology on Gambier Island.
(Photo: Tim Turner)

TABLE 2: CAMPS AND OUTDOOR SCHOOLS IN HOWE SOUND

NAME	OWNER	LOCATION	START OF OPERATION	ANNUAL ENROLLMENT	AGE RANGE	OPERATING SEASON	SIZE OF PROPERTY
Cheakamus Centre	North Vancouver School District 44	Paradise Valley, Brackendale	1969	13,000+	children, youth, adults	year round	420 acre
Evans Lake Forest Education Centre	Evans Lake Forest Education Society	Paradise Valley, Brackendale	1960	4,000	youth	Summer camp, winter camp, year round rentals	33 acres
Easter Seals Camp Squamish	BC Lions Society for Children with Disabilities	Brackendale	1972		youth	Summer camp	
Daybreak Point Bible Camp	In Trust by 11 Greater Vancouver Churches	Anvil Island	1939	1,100	youth	Summer camp; rentals spring and fall	96 acres
Camp Potlach	Boys and Girls Clubs of South Coast BC	Potlach Creek	1940s	1,000+	youth	July-August	133 acres
Camp Elphinstone	YMCA of Greater Vancouver	Langdale, Sunshine Coast	1907	7,000+	youth to adults	year round	
Camp Sunrise	Salvation Army	Gibsons	1925				
Camp Latona	Privately owned; Camp Latona Society leases the site	Gambier Island, north shore	1959		youth	July-August	118 acres
Camp Artaban	Camp Artaban Society	Gambier Island, SE shore	1923		youth and families	Spring, summer, fall	67 acres
Camp Fircom	Camp Fircom Society	Gambier Island, SE shore	1923	500	youth	Summer camp; rentals spring/fall	120 acres
Sea to Sky Outdoor School for Sustainability Education	Tim and Wendy Turner	Camp Elphinstone, Camp Fircom, Keats Camps	1991	2,000	elementary, secondary	Spring, fall	
Keats Camps	Convention of Baptist Churches of BC	Keats Island	1926	1,200	youth	Summer camp; year round rentals	230 acres
Camp Bow-Isle	Christian Science	Bowen Island	1960		youth, families, adults	Summer	

Note: Camp Summit was excluded due to its location 30 kilometres up the Squamish valley.

What role does environmental education play in First Nations cultural and spiritual heritage?

Four out of 12 environmental education organizations surveyed included some First Nation heritage or Indigenous practices content in their curriculum. This is particularly relevant as the Ministry of Education has recognized the importance of integrating First Nations Principles of Learning across the curriculum. On the other hand, First Nations inhabiting or using Howe Sound since time immemorial have been educating their children immersed in the environment without exception. There was no other classroom.

The Skw'une-was program at Cheakamus Centre has shared traditional practices of First Nations people since 1986 through its overnight programs at its Coast Salish Big House. Students engage in traditional long house life, eating traditional foods over open fires, hearing local legends and traditional songs; and learning about ceremonies, medicinal plants, basket-weaving and carving.



Skw'une-was ceremony. (Photo: Cheakamus Centre)



Photo: Gary Fiegehen

“South of Squamish beside Highway 99 is the celebrated granite mountain known to the Squamish people as *Siyám Smánit* (the Chief). In the long ago, the mountain was actually a long-house transformed to stone by *Xáys* (transformer brothers). If you look closely at the mountain you can see the outlines of the animals and people trapped inside when it was transformed. Also visible is a dark vertical line said to have been created by the corrosive skin of a two-headed sea serpent, *Sínulhkay*, as he slithered to the summit”⁵

What trends relate to environmental education in Howe Sound?

To our knowledge no one has done an analysis to see if the number of youth attending camps and outdoor schools in Howe Sound has increased over the years, or if the numbers per capita for the region might be increasing, but judging by the longevity of the organizations, interest and participation in outdoor education has certainly not diminished. Several new private and public ventures in environmental education have arrived in Howe Sound over the past decade, including Quest University Canada which opened in Squamish in 2007, a West Vancouver School District year-round outdoor program at the Bowen Island Community School, which launched in 2013, and Camp Suzuki, with a strong Squamish Nation involvement, just launched in 2015.

Ecotourism operators engage thousands each year in diverse activities that offer a potential for greater environmental learning: Highway 99 based bus tours with popular stops at Porteau Cove, Shannon Falls, and Britannia; boat tours on Howe Sound, and raft trips on the Squamish and Cheakamus rivers. The Sea to Sky Gondola offers guides and interpretive information at its lookouts and along trails. The Britan-

nia Mine Museum provides guided tours of the water treatment plant that now protects Howe Sound from the harmful discharge of mine waters.

At the same time, outdoor schools in Howe Sound have had a growing student enrollment over the past decade. There is a broad resurgence or interest in outdoor learning, given concerns about the time that children spend indoors, the so-called “nature-deficit disorder” coined by author Richard Louv.⁶ The BC Ministry of Education is releasing a new curriculum that provides greater opportunity for place-based or outdoor “learning” and indigenous First Nations culture. Educators are also showing increased interest in new professional development opportunities in outdoor learning as evidenced by the development of adult programs on offer at educational sites.⁷ There is a growing partnership between schools and educational partners such as Metro Vancouver, Vancouver Aquarium, and the Maritime Museum. In Howe Sound, Quest University Canada collaborates with the Squamish River Watershed Society to connect student learning and research with environmental rehabilitation and monitoring in the Squamish Estuary.

What can you do?



Individual and Organization Action:

- Familiarize yourself with educational opportunities available to all ages in Howe Sound, and get involved!
- Explore opportunities to incorporate outdoor learning and natural sciences into professional development.



Government Action and Policy:

- Increase awareness of and encourage participation in the many educational opportunities offered in Howe Sound for all ages.
- Prioritize protection of Howe Sound's natural beauty so that it remains preserved for educational opportunities to thrive and expand in the future.
- Support research on children and youth development outcomes from natural science educational opportunities, in order to better understand and document the benefits of these programs, and justify further growth.
- Collect and maintain information on educational opportunities and participation in Howe Sound to track trends to understand needs and desires for this type of learning.
- Identify additional local conservation groups, citizen science projects, and restoration efforts for potential collaborations with educational initiatives.
- Capitalize on the uniqueness of Howe Sound's natural beauty and accessible location by expanding outdoor education programs throughout more schools in the Greater Vancouver Area.

Resources

Bowen Island Community School
go45.sd45.bc.ca/schools/bowenisland

Camp Artaban
campartaban.com

Camp Elphinstone
gv.ymca.ca

Camp Fircom
fircom.ca

Camp Sunrise
campsunrise.ca

Camp Suzuki
campsuzuki.org

Camp Potlach
bgcbc.ca

Capilano University
capilanou.ca

Cheakamus Centre
cheakamuscentre.ca

Easter Seals Camp Squamish
eastersealscamps.ca

Evans Lake Forest Education Centre
evanslake.com

Island Pacific School, Bowen Island
islandpacific.org

Quest University Canada
questu.ca

Metro Vancouver School & Youth Leadership Programs
metrovancover.org

Sea to Sky Outdoor School for Sustainability Education
seatosky.bc.ca

Southlands Heritage Farm
southlandsfarms.com

Footnotes

¹ <http://www.bccamping.org>

² T. Dunn, Managing Partner, Sea to Sky Gondola, personal communication, June 17, 2016

³ <https://www.epa.gov/education/what-environmental-education>

⁴ http://www.acacamps.org/sites/default/files/resource_library/report-directions-youth-development-outcomes.pdf

⁵ Reproduced with permission from “Where Rivers, Mountains and People Meet”, Squamish Líl’wat Cultural Centre

⁶ Louv, Richard. 2005. Last Child in the Woods: Saving our Children from Nature Deficit Disorder. Chapel Hill, NC : Algonquin Books of Chapel Hill. 323p.

⁷ <http://www.cheakamuscentre.ca/s/programs.asp>