

SYMBIOSIS
STEAM Ecosystem

The Evolving State of STEAM Learning in B.C.

An Environmental Scan &
Ecosystem Engagement Initiative



Executive Summary

January 2020

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STEAM learning and literacy are essential foundations of our education system and knowledge economy of the 21st Century, both locally and globally. Symbiosis, B.C.'s STEAM Learning Ecosystem of people, resources and technology is responding to this opportunity. Symbiosis's mission is to build collaborative partnerships with diverse individuals and communities committed to cultivating an interlinked STEAM network with the ability to provide learning opportunities that reach all learners in B.C.

To better understand the existing STEAM Learning Ecosystem in B.C and guide the process of scaled growth, Symbiosis convened *The Evolving State of STEAM Learning in B.C.: An Environmental Scan and Ecosystem Engagement Initiative*. The project investigated the current landscape of STEAM learning organizations across a range of sectors, audiences and educational contexts to produce a comprehensive snapshot of STEAM learning in B.C. in 2019.

The environmental scan included extensive digital research, phone interviews, and email correspondence with hundreds of organizations across seven geographic regions of B.C. A wide range of data was collected for each organization, including

Symbiosis Environmental Scan - Provincial Totals	
Total Number of Organizations Identified	726
Organizations with Public Data Collected	553
Organizations Contacted during Outreach Process	506
Organization that Responded to Confirm Data	165
Number of Phone Interviews	72

their location, key contacts, services offered, communities served, current evaluation practices, interest in joining Symbiosis and more. Both quantitative and qualitative data were gathered through the process.

In total, the Symbiosis Environmental Scan identified a diverse and dynamic ecosystem of over 725 organizations that are actively engaged in STEAM learning, or are interested in supporting it, across the province. These organizations, representing a variety of sectors, audiences and educational activities, are spread across B.C. with significant regional clusters. Each region tends to have a relatively distinct composition of organizations, funding base and approaches to STEAM education, as well as diverse regional needs and opportunities.

STEAM Organizations by Region	Lower Mainland	Vancouver Island	Prince George	Okanagan	The North	Columbia / Kootenay
Total Organizations	372	90	82	75	73	30
Percent of Prov. Total	51%	12%	12%	10%	10%	4%

Notably, there is an extensive and active STEAM network in the Lower Mainland, with Science World serving as a key backbone organization. The Central Interior and the North also feature several core organizations and growing support and interest in the network, with The Exploration

Place providing important leadership in the Prince George region. Southern Vancouver Island is an emerging regional hub with a strong group of core and supportive organizations. Importantly, the extent and strength of B.C.'s STEAM Learning Ecosystem today is a product of the significant and sustained work that Science World and other core partners in Symbiosis have invested in growing the network over the last two decades.

Reported Current Engagement Level in Symbiosis (B.C.)	Total
Core	35
Involved	24
Supportive	45
Interested	45
Not Currently Interested	4
Not Sure	30

Developing an understanding of current evaluation practices related to STEAM learning across the province was an important goal of the project. Notably, rigorous and longitudinal evaluation of STEAM learning across consistent, shared metrics of success was not found to be prevalent to any great degree. Numerous organizations around the province indicated a sincere interest and need for more fulsome and effective evaluation strategies and tools, and this appears to be a significant benefit of network engagement and membership.

This environmental scan and provincial engagement process have provided a wealth of data to inform our understanding of the current provincial STEAM Learning Ecosystem. Based on these findings, several opportunities for priority next steps are recommended, including: advancing the regional growth strategy; expanding the presence and services of the provincial network; focusing on services that can provide

Recommended Opportunities to Grow Symbiosis
Advance the Regional Growth Strategy
Expand Provincial Network Building
Focus on Initiatives and Services that can be Monetized and/or Funded
Connect Funding and other Resources with Targeted Initiatives
Convene a Collaborative Process to Develop an Evaluation Strategy and Tools

revenues and initiatives that can be funded; and connecting funding and resources strategically with priority opportunities. Convening a collaborative process to develop an evaluation strategy and tools, for organizations and the network as a whole, is also strongly recommended.

The Evolving State of STEAM Learning in B.C. Environmental Scan and Ecosystem Engagement Initiative has provided a snapshot of the Symbiosis Learning Ecosystem, engaged with partners and supporters across the province, and raised awareness about Symbiosis and its great potential to grow our collective impact. It has illuminated strong, regional networks of practice grounded in relationships and partnerships grown over many years of collaboration. Most importantly, the initiative has affirmed the compelling benefits of a provincial network, to its members and its leaders including Science World, and the vital need to connect and scale our efforts to provide STEAM learning opportunities for all learners in B.C. in the years ahead.