

**SCIENCE LITERACY WEEK: BUILDING PARTNERSHIPS
THROUGH A PASSION FOR DISCOVERY**

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Abstract

Launched in 2014 by a graduate of the University of Toronto who reached out to libraries in his city, Science Literacy Week now partners libraries, museums, and universities across Canada through a passion for discovery and sharing. The week-long event unites inquiry and zeal, highlighting Canadian scientists and science communicators. Librarians at the University of British Columbia (UBC) joined the foray in 2015, venturing out of their comfort zone to organize events and displays celebrating the wonders of science. The first year saw a modest book display and a few exhibits, but the event has grown to include a Wikipedia edit-a-thon, a Science Expo, a Living Library, and a coding workshop. We'll share how this was achieved through collaborations within the library, with campus groups, and beyond UBC. Join us as we explore the secret ingredients that have contributed to a fun and successful annual celebration.

Keywords: Science Literacy, Wikipedia, academic libraries, collaboration

Introduction

Science Literacy Week (<http://scienceliteracy.ca/>) is a week-long celebration of science-based activities in September that highlights outstanding scientists and science communicators across Canada. It was started in 2014 by Jesse Hildebrand, a newly minted graduate of the University of Toronto who is passionate about science, books and libraries. In the first year, Jesse persuaded four institutions to participate, including the University of Toronto Library and the Toronto Public Library. In 2015, he decided to take it nation-wide and invited libraries, museums, universities and science organizations to join. Each year it continued to grow, and now in 2017, it is supported by a major federal funding agency, the National Sciences and Engineering Research Council of Canada (NSERC).

In this paper, we will share our rationale for participating, describe the collaborations within and beyond our libraries at the University of British Columbia, and divulge the secret ingredients to success.

Rationale

When we received the invitation to participate in 2015, our initial reaction was one of hesitation since September is a busy time of year for academic libraries, and the activities were not part of our traditional programming. Jesse's passion was contagious, however, so we took the opportunity, started small, and have built on our efforts in subsequent years. Besides his enthusiasm, why did we jump on board?

We all share a passion for science and so the opportunity to celebrate it was appealing, but in 2014 we also felt an acute need to highlight the importance of scientific research. Science, math and technology underpin all aspects of our lives. As one student commented on one of the displays, "[science] is relevant to every aspect of the world." Whether in the pursuit of policy to drive sustainability within our physical environment or establish equity amongst peoples, the application of scientific principles and an understanding of scientific methodologies is critical for an analysis and interpretation of information and critical decision making, both at an individual and a societal level. At the time, however, the Canadian government had shifted funding from basic science to applied research, and was muzzling federal scientists and closing federal science libraries (Amend & Barney, 2016).

A number of other factors related to science education spurred on our participation. While Canada is ranked as a top performer in science literacy, this is not the case across the globe or even close to home (OECD, 2016). At the same time, any one nation's ranking in science literacy is brought into question when we tease apart what is meant by scientific literacy and how we measure not only one's knowledge of scientific principles and methodologies, but how this manifests itself in our daily lives, from personal to societal choices in social policy, economics, and politics (Bauer, Allum, & Miller, 2007).

Scientific literacy can be understood in many ways, and on a sliding analytical scale. This covers simply knowing more science, developing an ability to interpret and evaluate scientific

outcomes and theories, and having the ability to abstract one's scientific knowledge and principles, ultimately being able to bridge one's knowledge of science and its methods to other areas of practice (Laugksch, 2000; Sapp, 1992). There are issues of concern across each of these notions of science literacy, from tests that demonstrate an ongoing lack of scientific knowledge on a global basis (OECD, 2016) to populations who have increased science literacy yet are highly skeptical of scientific discoveries, especially when these scientific understandings are politically or religiously charged (Drummond & Fischhoff, 2017; Kahan et al., 2012).

Ultimately, working to move the discussion of science literacy beyond simply knowing more science and engaging in a discourse that captures the broader implications of being scientifically informed factored heavily into why and how we participated in Science Literacy Week. Our participation also furthered our strategic goals by growing collaborations with campus and community partners to advance scientific teaching and learning (UBC Library, 2015). The event was also an opportunity for the library and librarians to directly build on our role as educators of information literacy; and engaging in critical conversations around science literacy, with information literacy as the background, contributes to a general heightened sense of literacy (Podgornik, Dolničar, & Glažar, 2017).

Collaborations

Leading an event such as Science Literacy Week provided an excellent opportunity for us to collaborate with colleagues in the library, across campus and beyond the institution.

As a large institution, we were fortunate to have multiple libraries and units participate. Woodward Library (Vancouver campus) and the Okanagan Library (Okanagan campus) were natural partners as both libraries directly support students and faculty in science, engineering and health. We were joined by the Education Library (Vancouver campus), which promotes science and maker activities to the education students, many of whom will teach science in the classroom. Librarians from the three locations met early on to share ideas, and although we ran separate activities, we used one LibGuide (<http://guides.library.ubc.ca/scilit17/>) to promote all events. In addition, the Library's conservation staff participated in the Woodward Library Science Expo, sharing the biology and chemistry of preservation, and last year the Xwi7xwa Library (Vancouver campus) created a book display on Indigenous science. One future goal will be to partner with more branches since science touches all disciplines.

As librarians, we benefit from the expertise of other professionals within the institution. UBC Library Communications worked on a promotional campaign that meant outreach to departments, digital signage around campus, social media, and several articles about events in the student newspaper. The UBC Information Technology (UBCIT) unit has been incredibly supportive in supplying and setting up equipment. As I've learned from a colleague, it is important to invite these groups into the planning early in the process as they have much to contribute and require sufficient lead time to deliver.

We realize that we could not have achieved what we have in both 2016 and 2017 without the energy and creativity of our newest colleagues on both campuses. Despite it being arguably the

busiest time of year, they took on the extra work of planning and orchestrating events. It was wonderful to have new ideas for events such as the Living Library, and the addition of art into the mix such as the I Love Science felt board and the Dress-as-a-Scientist photo booth.



Figure 1. Photo: 2017 Science Expo at Woodward Library

In addition to a dedicated team at our institution, we have many enthusiastic students, faculty and staff who are passionate about their work and about education. Engaging them is an excellent way to provide a venue to highlight their work while opening new avenues of involvement with the library. Many of our activities are geared toward giving young scholars the opportunity to practice communicating what they do, increasing their own and their peers' science literacy. By involving students and groups already engaged with the library (e.g. employees, advisors, researchers), we were able to leverage their passion for both libraries and science.

In 2017, across both campuses, we worked with over a dozen student and campus groups. Two activities that highlight this engagement include a Science Expo at Woodward Library and display tables at Okanagan Library.

The Science Expo, hosted at Woodward Library, invited numerous campus partners to participate in sharing their work and contributing to scientific inquiry and exploration. Partners

included the Beaty Biodiversity Museum who shared not only the work that the museum does but the educational programming they make available to the campus and the broader public, and Open Science Network, an interdisciplinary group committed to science outreach.

The Okanagan Library ran a series of display tables called “Show me something I’ve never seen before” which showcased diabetes, women in science, and health and wellness research within the library. The diabetes table was organized by the Okanagan Biochemistry Course Union, one of whose members is also a student employee at the library. As participants enjoyed homemade cupcakes, course union members revealed the body’s secrets by describing the biochemical pathway from sugar consumption to the onset of diabetes. This was a unique opportunity for these undergraduate students to share their passion for science and for the library to bridge relationships with the student body.

In 2017 we made headway in engaging faculty as well as students. Previously, faculty had been tangentially involved in Science Literacy Week through faculty recommended book displays. This year we launched a library produced podcast series, Frequencies (<http://apple.co/2yuBbl5>), aimed at providing a critical view of faculty research in the sciences, and faculty analyses of how we understand and instruct science literacy in the classroom.

This opportunity helped to build another level of relationship between faculty and librarians, providing a new avenue for engaging and supporting their research. At the same time, it provided faculty with a new venue for disseminating their scholarly outputs and functions. Perhaps most significantly, the format created the opportunity to move the discussion of science literacy beyond the walls of the academy and past Science Literacy Week. Not being tied to a fixed time and venue like a lecture, the library achieved international reach, and the content continues to be accessed long after Science Literacy Week has ended.



Figure 2. Photo: 2017 Biochemistry Course Union cupcakes

For 2017 Science Literacy Week, we were able to connect with expertise outside UBC by partnering with BCcampus, other BC academic libraries, and Ladies Learning Code to program two main events, a Wikipedia edit-a-thon and a coding workshop.

Woodward Library hosted a Wikipedia edit-a-thon as did our colleagues at British Columbia Institute of Technology, Douglas College, Kwantlen Polytechnic University, and Simon Fraser University. The event was sponsored by BCcampus, an organization that supports universities and colleges in the province of British Columbia by sharing resources for open education and technology-enabled teaching and learning. Under the theme of Science and Scientists from British Columbia, we edited 40 articles together across multiple campuses. The benefit of a Wikipedia edit-a-thon is that the articles created or edited by participants will be accessible and useful to the public. The edit-a-thon dashboard (Engle & Miller, 2017) continues to track the number of views of these articles even after the event.

Woodward Library partnered with Ladies Learning Code (now called Canada Learning Code, <https://www.canadalearningcode.ca/>), a not-for-profit organization which promotes technical skills among women and youth. We hosted a coding workshop on September 23, which was the National Learn to Code Day and coincided with the Science Literacy Week. The workshop was well attended with 25 participants. There was one instructor and nine assistants; the high assistant to participant ratio meant that participants' questions were promptly answered.

A number of factors led to the success of the coding workshop. The content was specifically developed for the National Learn to Code Day and addressed popular topics like artificial intelligence and big data to draw participants both inside and outside our home institution. The timing was ideal because having it on a Saturday meant that it did not conflict with classes. The promotion reached a wider audience because we could advertise the event through the communication channels of both UBC Library and Ladies Learning Code. The academic space appealed to attendees because it was different from the usual venues of technology companies. The workshop was held in the Lillooet Room, an attractive space that is part of the refurbished core of the 1925 Main Library.



Figure 3. Photo: 2017 National Learn to Code Day workshop at UBC Library

Going Forward

Building on our successes, we look forward to expanding our involvement in Science Literacy Week in the years to come. On both campuses we endeavour to continue building stronger and more fruitful relationships with other parties involved in science education, across the university and across the communities.

In Vancouver we are keen to partner with the local science centre to offer a Wikipedia edit-a-thon in the evening. We hope that the beautiful space and timing will attract new audiences and

increase participation. For the Science Expo, we may invite daycares and schools on and near the campus to reach families in the university neighbourhoods. The University Neighbourhoods Association (<https://www.myuna.ca/>) would be an ideal partner to promote the Science Literacy Week events to local families.

In the Okanagan, where in the last several years we have been making efforts to work collaboratively with the local public library system, the Okanagan Regional Library, we see Science Literacy Week as an excellent opportunity for joint programming, an opportunity that can help to ground the work of the university within the community and one in which the community can derive direct benefit from the scholarly outputs of the university.

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