

ASLA's Second Conference for Science Teachers

The Atlantic Science Links Association (ASLA, <http://atlanticsciencelinks.dal.ca/>) held its annual conference for science teachers at the Life Sciences Centre of Dalhousie University on August 28, 2018. ASLA is a charitable science promotion organization which coordinates outreach programs for students in grades primary to twelve. ASLA is a volunteer-driven educational program with a mandate to create sustainable relationships between science and education communities. Following on the success seen in last year's conference, the 2018 conference focused again on the Junior High science curriculum (grades 7-10). The conference employed a variety of hands-on activities to introduce teachers to methods illustrating important concepts in a variety of science disciplines.

Thirty teachers from every area of Nova Scotia came to the university to take part in this exciting PD day. The conference opened with greetings to all the teachers from ASLA's president Arunika Gunawardena, who expounded upon ASLA's goal to provide Nova Scotia's young people with experiences and opportunities to explore the sciences. This was followed by a speech from the Acting Dean, Faculty of science, Sandra Walde. She started her speech by mentioning that we are celebrating Dalhousie University's 200th anniversary and commented on ASLA's continued volunteering presence in schools across Nova Scotia and the importance of it. She appreciated how important a teacher's role is in shaping the life of students. She concluded by thanking the teachers for being so dedicated and passionate about science to give up a beautiful summer day to attend the conference.

Upon the completion of the opening ceremony, the teachers were split into two groups and interchanged labs throughout the day. The morning workshops consisted of a cell & molecular biology lab or an ecology & evolution lab. The cell & molecular biology lab was led by Arunika Gunawardena with her lab students, Department of Biology, Dalhousie, and consisted of teachers creating slides of leaves to view under a microscope. The second part of the lab involved a colorful DNA extraction from a variety of fruits and vegetables, including bananas and broccoli. The ecology and evolution lab, led by Elizabeth Welsh, Department of Biology, Dalhousie, focused on the shapes of mollusc shells and the evolutionary processes driving their formation. Many beautiful shells were observed during the process! Upon the completion of the first labs, both groups enjoyed a tea break and promptly switched to complete the lab that they had not yet attended.

After a lunch break, a special photo of the volunteers, board and attendees was taken to commemorate the day. The teachers were then treated to an information session on science fairs, presented by Adam Sarty, Associate Vice-President, Research and the Dean, Faculty of Graduate Studies and Research, Saint Mary's University. The teachers then rejoined their groups to either begin with an earth science session or a greenhouse tour/ocean school information session. The earth science lab was led by Richard Cox,

Department of Earth Science, Dalhousie, who demonstrated a variety of hands-on tests to identify minerals. Teachers were provided a variety of mineral samples and test kits to take back to their classroom. Meanwhile, the second group participated in an information session on “Ocean School”: a learning program focused on creating interest in ocean science while educating students about the world’s oceans presented by Boris Worm and Lucija Prelovec, Department of biology. After that, they enjoyed a tour of Dalhousie University’s beautiful greenhouse, guided by the ASLA’s executive director Rajesh Rajaselvam, Department of Biology, Dalhousie. Teachers were shown a variety of beautiful plants including species brought from Sri Lanka!

After a tea break, the groups switched to enjoy the lab they had not yet attended for the remainder of the afternoon.

The conference was closed with words from Paul Bentzen, Chair, Department of Biology, Dalhousie University, who thanked teachers for dedicating a day to science. He noted the current tension-filled relationship between politics and science around the world, along with the misconceptions held by the public about scientific advancements. He explained that ASLA’s volunteer-based services, partnered with the science teacher’s dedication to science in the classroom, would result in great contributions to the community and all of Nova Scotia. He concluded by again thanking the teachers for their passion and dedication and appreciating the volunteers who helped make such a successful day.

Teachers completed a small evaluation form for ASLA for feedback on the conference. Each teacher left with the teaching resources that they had been given throughout the labs, including samples of the lace plants to grow in their classrooms and USB drives containing the lab presentations seen through the day.

The response to the conference was very positive, with many attendees taking the time to thank the volunteers and Board before they left for the day. Many expressed their gratitude for the conference and newfound excitement for the new school year. The comments received on the feedback forms were both positive and grateful (see below).

The Atlantic Science Links Association would like to thank NSERC, The Dalhousie University Faculty of Science, and Engineers Nova Scotia for the funding required to make this annual conference such a success! Dalhousie University’s Biology and Earth Sciences Departments also donated valuable time, energy and space to help bring this conference together. The support shown by our sponsors and departments made the conference possible and ASLA expresses gracious thanks to these groups.

We, the organizers, are very pleased with how the conference went overall and we are planning to organize the third one next year. If you are interested in organizing a lab for next year’s conference, please let us know. We welcome your comments and suggestions!

Teachers' comments

1. I enjoyed the hands-on approach. It was fantastic to see and do the labs and have presenters available to show and help us with the process. A wonderful learning and sharing opportunity.
2. As an educator for a not-for-profit, I sincerely appreciate the free resources and knowledge provided that will help me build workshops to bring to local schools.
3. Can't say enough about the enthusiasm of the people involved- really set me up for a great start to my year! Thank you!!!
4. Thank you to all of the professors, presenters and of course amazing organizers and volunteers. Thanks Arunika and Rajesh! Your enthusiasm is contagious!
5. Very engaging and enjoyable. I enjoyed the hands-on labs. I loved the greenhouse tour, the plants were so interesting and beautiful.
6. Info session on Science fair: really enjoyed. Great value for students in this opportunity.
7. Enjoyed the session. I did not realize that there are so many resources put together to make my teaching experience easy.
8. The Sessions were inspiring and the speakers were excellent.
9. Thank you so much for another year of fantastic conference topics. I loved the addition of the ocean school and green house tour as well as the DNA extraction. Wonderful!
10. This has been one of the most useful PD sessions that I have ever attended. I appreciate the resources I've been given, the practical labs and the chance to network. The organization was excellent, and I've felt spoiled all day between lunch, time to ask questions, and thoughtful feedback.
11. Excellent classes. Enjoyed the experience. Will enjoy using the materials in my class.
12. You put so much work into prepping these! THANK YOU!
13. What a day! Great! Well done, I'll be bringing my students here and I'll use this in my class.
14. THANK YOU so much for your hard work in organizing this conference! It was an inspiring start to the school year. Well worth my time.



Photo 1: ASLA's conference for science teachers, 2018: At lunchtime, the science teachers, volunteers, and members of the Board of ASLA gathered in Dalhousie's Biology lounge to take a commemorative photo of the wonderful day!



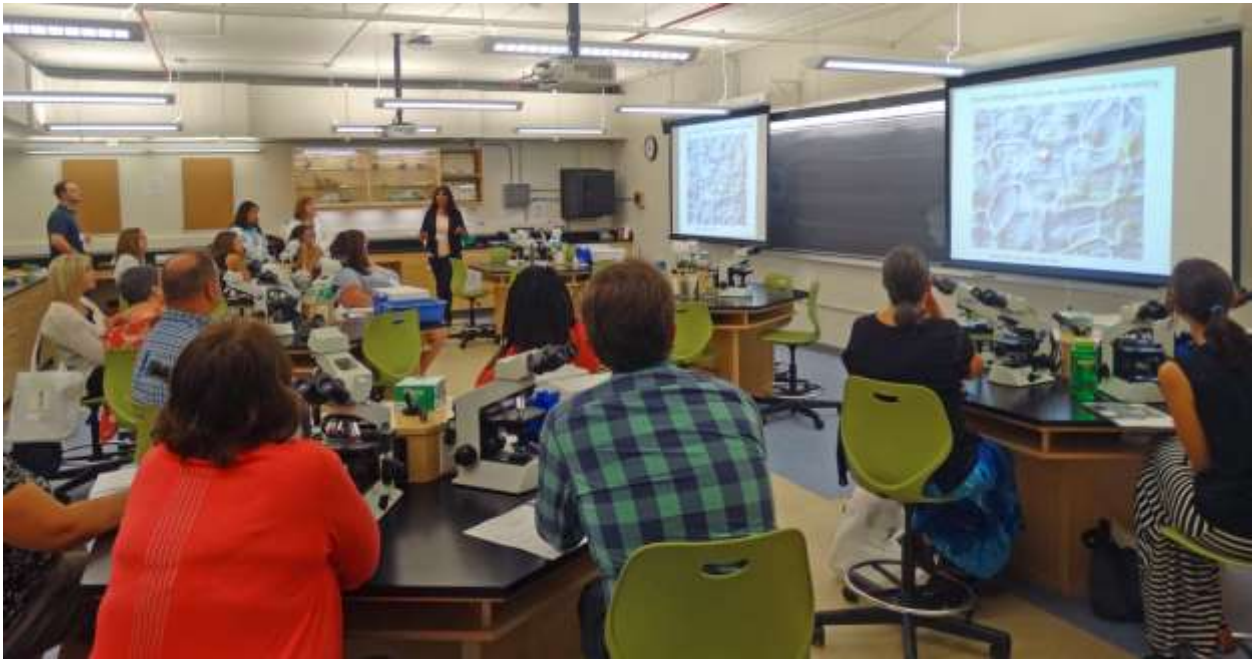
Photo 2: ASLA administrative assistant Michaela Kember manning check-in before the opening ceremony. Every teacher received a nametag, lab manual, and tote to carry all their educational materials in for the day!



Photo 3: ASLA president Arunika Gunawardena, Department of Biology, welcoming teachers during the opening ceremony of the conference.



Photo 4: The Dean, Faculty of science, Sandra Walde, welcoming teachers to Dalhousie University. Dalhousie University celebrated its 200th anniversary this year, marking generations of dedication to the sciences and community.



Photos 5,6: The cell biology lab, led by Arunika Gunawardena and lab students, Department of Biology, encouraged teachers to make their own slides! It also involved lots of teamwork to perform a colorful DNA extraction from fruits and veggies.



Photo 7: Lab members and volunteers guided science teachers through an exciting lab that included teachers receiving a lace plant to grow in the classroom!



Photo 8: Elizabeth Welsh, Department of Biology, Dalhousie, presenting to science teachers on the evolutionary processes altering the shells of many common mollusk species. Teachers got to handle and study a variety of beautiful shells that were supplied!



Photo 9: The teachers were treated to a tour of Dalhousie University's touch tanks, containing a vast array of ocean life that you can reach out and touch!



Photo 10: A lunch break provided a lovely break for a busy day!



Photo 11: Adam Sarty, Associate Vice-President, Research and the Dean, Faculty of Graduate Studies and Research, Saint Mary's University presenting a special information session on science fairs.



Photo 12: Boris Worm and Lucija Prelovec, Department of Biology, presenting “Ocean School”: an exciting and innovative immersive learning program focused on creating interest in ocean science while educating students about the world’s oceans!



Photo 13: The earth science lab was led by Richard Cox, Department of Earth Science, Dalhousie, who demonstrated a variety of hands-on tests to identify minerals. Teachers were treated to their own kits for geology studies to take back to the classroom this fall!



Photo 14: Touring the beautiful greenhouses in Dalhousie's life sciences center while being guided by Rajesh Rajaselvam, Department of Biology, science teachers were given the opportunity to study a variety of beautiful and unique plants quite rare to Nova Scotia: the plants in this particular room were brought all the way from Sri Lanka!



Photo 15: Paul Bentzen, Department of Biology, closed the conference by thanking teachers for their dedication while highlighting the critical role a strong science education has on not only students, but our community. Inspiring words to close a very successful day!
