Career Connections

This document is designed to be used by teachers as a career exploration unit resource. It highlights how the Canadian Light Source (CLS) employs a broad range of people. 18 employees were interviewed, featuring many different careers and skill sets including scientific, technical and research skills. Each interviewee introduces their career path and education background then describes their current job activities. Each brief bio below has the areas of science curriculum the bio relates to, links to background articles and a 2 minute video of the interview.

*** Resources are in French

1. Rob Lamb
Science Curriculum: Environmental Science, Health Science, Physical Science, Biology, Chemistry, Physics
Rob Lamb is the CEO of the Canadian Light Source. Rob works with a broad range of people to keep the CLS operational, such as engineers, scientists, and accountants, which Rob finds interesting. He also advocates for how the synchrotron can be used, to look at nature in its finest detail or make medical isotopes for the medical sector. The CLS is involved in discovery and application, and Rob is looking at how he can improve the connection of science and technology.
http://bit.ly/1UFisrb - Brightest Light in Canada Video
To view the interview go here: http://bit.ly/1MHn8c1

2. Andrew Grosvenor
Science Curriculum: Environmental Science, Physical Science, Chemistry, Physics
Andrew Grosvenor is an Associate Professor of Chemistry at the University of Saskatchewan. He has been interested in how atoms interact and bond and how molecules and compounds are formed ever since high school. When Andrew attended University, he knew he wanted to be a chemist. Today, his research involves solid state materials focusing on nuclear materials. Andrew shares his findings with nuclear power industries to better predict how nuclear materials change and interact with the environment.
http://www.usask.ca/chemistry/groups/grosvenor/ - Research Website
http://artsandscience.usask.ca/profile/AGrosvenor - University Profile
To view the interview go here: http://bit.ly/1L0VJ3B

3. Chithra Karunakaran
Science Curriculum: Environmental Science, Biology, Chemistry
Chithra Karunakaran is a Staff Scientist at the Canadian Light Source. She grew up on a banana and coconut farm with her parents and grandparents. After listening to her parents discussing diseases that infect banana and coconut trees, she knew she wanted to become a scientist and do something to contribute to the community. Today, Chithra’s research focuses on the need to produce more food for the population. She is looking at how to develop plants that can better adapt in their changing surroundings and how to develop disease resistant crops.
To view the interview go here: http://bit.ly/19I7i9T
4. Derek Peak  
**Science Curriculum: Environmental Science, Biology**  
Derek Peak is an Associate Professor of Chemistry at the University of Saskatchewan. He is interested in soil science but finds it difficult to study soils since many synchrotron facilities see it as being unclean. Derek was excited to learn that the Canadian Light Source recognizes soil science and encourages soil science research within the facility. Today, Derek’s research team looks at soil and the toxicity of metals and metalloids in soil at its natural system.  
[http://www.soilchem.usask.ca/research.html](http://www.soilchem.usask.ca/research.html) - Research Website  
To view the interview go here: [http://bit.ly/1igwy6g](http://bit.ly/1igwy6g)

5. Denis Beauregard  
**Science Curriculum: Physical Science, Chemistry, Physics**  
Denis Beauregard is a Research Technologist at the Canadian Light Source. He was interested in taking engineering at University but when he applied the University raised the acceptance marks for engineering and he was unable to attend. Denis decided to take an electrical course in Saskatoon instead. He did not realize how many different careers there were that required electrical technicians. There was an opportunity to work for the CLS, and he took it. Today, Denis works with a team of technicians to maintain the daily functions of the synchrotron.  
To view the interview go here: [http://bit.ly/1igwy6g](http://bit.ly/1igwy6g)

6. Erika Bergen  
**Science Curriculum: Health Science, Biology, Chemistry**  
Erika Bergen is an Industrial Science Associate at the Canadian Light Source. She knew she wanted to go to school where she can do something practical and hands on. Erika decided to enroll into S.I.A.S.T. (now known as Saskatchewan Polytechnic Saskatoon) and entered the biotechnology program. Today, she works for the Industrial Science Division at the Canadian Light Source and provides assistance to all the industrial users.  

7. David Cooper  
**Science Curriculum: Health Science, Biology, Chemistry**  
David Cooper is an Associate Professor at the University of Saskatchewan and Canada Research Chair in Synchrotron Bone Imaging. He has always been interested in forensics and human evolutions and started his career in archeological science. Then he was introduced to imagining science. David was impressed as to how imaging science can answer many medical questions. Today, he focuses on high resolution imaging of bone structure and the related study of bone adaptation, aging and disease.  
[http://www.cooperlab.ca/](http://www.cooperlab.ca/) - Research Website  
[http://www.ucalgarymag.ca/issue/winter-2012/article/its-his-bones](http://www.ucalgarymag.ca/issue/winter-2012/article/its-his-bones) - Bone Health Article  
8. Ingrid Pickering and Graham George  
Science Curriculum: Health Science, Biology, Chemistry, Physics  
Ingrid Pickering is a University of Saskatchewan Professor and the Canadian Research Chair in Molecular Environmental Science. Graham George is a University of Saskatchewan Professor and the Canada Research Chair in X-Ray Absorption Spectroscopy. Ingrid attended University in Cambridge, went to do her PhD in London and ended up in New Jersey to do her postdoctoral fellowship, which is where she met Graham. Graham did his PhD in synchrotron work and was interested in X-ray Absorption Spectroscopy. Together, they were able to find enough funding to build the BioXAS beamline at the Canadian Light Source. The BioXAS beamline allows for scientists to image, zoom in, or measure concentrations of metals in living things which can benefit all life science fields.  
http://homepage.usask.ca/~inp449/ - Ingrid Pickering Research Website  
http://www.innovation.ca/en/AboutUs/Governance/BoardDirectors/BiographyIngridPickering - Ingrid’s Biography  
http://www.usask.ca/toxicology/people/faculty/graham-george.php - Graham’s Profile  
To view the interview go here: http://bit.ly/1JvrNMQ

9. Michel Fodje  
Science Curriculum: Health Science, Biology, Chemistry  
Michel Fodje is a Staff Scientist at the Canadian Macromolecular Crystallography Facility. He did his Masters in biochemistry in Cuba where he looked at ways to create vaccines for tropical diseases. He wanted to use the synchrotron to get more information and went to Sweden to learn more about the synchrotron and how it can be used in his research. Michel eventually came to the CLS and does research on protein function and how it can be manipulated to improve human health. Today, Michel uses crystallography, a technique where the proteins atomic structure can be determined, to discover new proteins and further his research.  
http://cmcf.lightsource.ca/beamlines/about-cmcf/ - Information about CMCF  
To view the interview go here: http://bit.ly/1hRnCnX

10. *** Cécilia Barette Leduc  
Science Curriculum: Environmental Science, Health Science, Biology, Chemistry  
Cécilia Barette Leduc was a Montreal high school student who has always been interested in science. Currently she is attending Pearson College UWC in Victoria. She has participated in many science fairs and found out about Students on the Beamline through her teacher. When she came to the CLS the second time with her classmates they decided to focus their project on bees, in particular bees infected by nosema. What Cécilia enjoyed the most about her experience was finding the answer to their scientific problem because no one knew what the results were going to be. Her experience with Student on the Beamlines gave her an understanding of the scientific community and how scientists works collaboratively to answer a scientific questions.  
http://www.psnm.qc.ca/nouvelles/nouvelles/students-on-the-beamlines/ - School Article (In French)  
To view the interview go here: http://bit.ly/1xeLdFG (Parts of interview are in French)
11. Grant Cubbon
Science Curriculum: Health Science, Physical Science, Chemistry, Physics
Grant Cubbon is the Manager of Health, Safety and Environment at the Canadian Light Source. He has always been interested in health and safety particularly in the industrial field. When he completed University he entered the work force and monitored Radon for Uranium mines. Today, Grant ensures that everything is done safely at the CLS. He educates employees about safety and makes sure that health and safety rules and regulatory requirements are being followed at the facility daily.
To view the interview go here: [http://bit.ly/1CVAws1](http://bit.ly/1CVAws1)

12. Jeff Cutler
Science Curriculum: Physical Science, Chemistry
Jeff Cutler is the Chief Industrial Science Officer at the Canadian Light Source. As a child he could not wait to come home and play with his chemistry set. He has always been interested in chemistry and took Chemistry when he went to University. After University he has worked in the academia, military, and industrial sectors. Eventually he decided to come to the CLS and provide industrial user support. Today, he is working with the private industrial sectors who come to the CLS support development in innovated research and technology.

13. *** Nicole Sylvain
Science Curriculum: Health Science, Physical Science, Biology, Chemistry
Nicole Sylvain was a Science Associate at the Canadian Light Source. She is AB Francophone and in high school she was interested in mathematics, physics, and biology. However, when Nicole went to University she decided to pursue her interest in Biology. She focused her studies to be in the science psychology, particularly in how metals affect the brain. While she was at the CLS, Nicole supervises the experimental floor and works in the labs to prepare samples for research groups. Today, she currently works as a Research Lab Manager at the University of Saskatchewan.
To view the interview go here: [http://bit.ly/1EYG6sX](http://bit.ly/1EYG6sX) (Parts of interview are in French)

14. Ronny Sutarto
Science Curriculum: Physical Science, Chemistry, Physics
Ronny Sutarto is a Research Associate on the REIXS Beamline at the Canadian Light Source. He is originally from Indonesia and did his post doctoral at the University of British Columbia. Ronny came to the CLS to use the synchrotron to further his research. Today, he supports users and collaborates with them to investigate different types of materials. He is interested in superconductors and is glad to be contributing and being a part of the research.
https://www.quantamagazine.org/20140430-decoding-the-secrets-of-superconductivity/ - Superconductivity Article
15. Dean Chapman
Science Curriculum: Health Science, Biology, Chemistry
Dean Chapman is the Science Director at the Canadian Light Source, a Professor at the University of Saskatchewan and the Canada Research Chair in X-Ray Imaging. He grew up in Oklahoma and went to Purdue University in Indiana for his graduate studies. He was a beamline scientist at the National American Light Sources for many years and when he came to the CLS, he was impressed at how the CLS was involved with the University of Saskatchewan. Dean finds that the University supports and drives many scientific programs at the CLS. Today, Dean is involved with managing the Science department at the CLS and he has an interest in biomedical imaging and how it can provide high resolution information for health science research.
To view the interview go here: http://bit.ly/1hRnDIJ

16. Scott Rosendahl
Science Curriculum: Health Science, Biology, Chemistry
Scott Rosendahl is the Mid-IR Beamline Scientist at the Canadian Light Source. Back in high school, Scott was disruptive in his chemistry class. His chemistry teacher asked Scott to research "Why liquid Oxygen is blue?" with the hopes of getting Scott to focus, and it did. His Chemistry teacher introduced him to his love of chemistry and chemistry problems. Scott is interested in Chemistry and how it connects to different areas of study like mathematics, biology, and physics. Today, he works on the Mid-IR beamline and helps users with different projects such as how stroke affects the brain.
To view the interview go here: http://bit.ly/1L0W7PL

17. Swathi Iyer
Science Curriculum: Physical Science, Chemistry, Physics
Swathi Iyer is a Postdoctoral Fellow. She has always been interested in physics and did her Masters and PhD in Industrial Science in India and United Kingdom respectively. Today, she is working on her Postdoctoral Fellow at the University of Saskatchewan. Using the synchrotron laboratory for micro and nano devices at the CLS, she is advancing her research on carbon and nanomaterials. Swathi is looking at how graphene can be applied to society for the future.
To view the interview go here: http://bit.ly/1VtMd0g

18. Tom Regier
Science Curriculum: Environmental Science, Biology, Chemistry
Tom Regier is a Beamline Scientist at the Canadian Light Source. He grew up on a farm in Laird Saskatchewan. He has always been interest in sustainable agriculture and how the soil will be left when people are done farming it. Today, he is looking into understanding the chemistry that goes on in the soil and how that information can lead to making better decisions in managing the land.
http://www.cbc.ca/sask/features/future40/  - Future 40 Article
http://www.canadianmennonite.org/articles/rjc-envisions-bigger-better-school  - RJC Article
To view the interview go here: http://bit.ly/1L0WmKw