

Annual Report

2009-2010



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Connecting the Scientific
and Educational Communities



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ESON...Experience the Connection

Science surrounds us and with the growing complexity of science related issues and the increased environmental and social impact on our daily lives, comfort, understanding and knowledge with science and technology is crucial. Science literacy is the foundation for a more informed and confident society now and in the future. In meeting the challenge to develop scientifically literate citizens, ESON is working hard to connect the scientific and educational communities through the formation of effective educational partnerships between teachers, scientists, and the community.



Edmonton Journal, March 7, 2010— “Science Olympics Celebrate Critical Thinking”

Lucio Gelmini, a chemistry instructor at Grant MacEwan, lights a combustible vapour in a jug to show how an internal combustion engine works. It was part of the Edmonton Science Olympics held at the Shaw Conference Centre.



About Edmonton Science Outreach Network

Edmonton Science Outreach Network has earned an excellent reputation since becoming a non-profit society in 1991. We are dedicated to promoting science literacy and educating students about future possibilities in science and engineering careers. Our programs are designed to directly benefit children and youth through personal interaction with scientists and engineers working in a diversity of fields. Long-standing volunteers, repeat users of our programs and increased requests for our programs attest to the quality of our service as well as the continued need in the community for those services.

ESON is also part of a larger organization of science networks, maintained by the Alberta Science Literacy Association (ASLA) www.asla.ca. ASLA is a registered charity that serves as an umbrella group for the five Science and Technology Networks in Alberta (Edmonton, Calgary, Red Deer and Medicine Hat, and Grande Prairie). ASLA works closely with both the scientific and educational sectors in the communities served to provide programs of high scientific and educational merit. ESON is also a member of Alberta's Promise. Alberta's Promise is a government initiative that recognizes organizations that support children and youth in Alberta.

Our volunteers are drawn from a wide range of backgrounds including government, industry, professional associations, research facilities, universities and colleges. Network volunteers work to provide the knowledge, skills and expertise to answer questions, make classroom visits, provide hands on science experience, judge science fairs, conduct field trips, aide in curriculum development and nurture budding young scientists and technologists.

In addition to casino funding received in 2009, ESON is generously supported by a grant from Alberta Advanced Education & Technology, administered through ASLA. These funds are supplemented by grants and donations from partner organizations, charitable foundations and private industry as ESON seeks to diversify its funding base and solicits contributions from new sources. Many donations, in kind and services-in-lieu also support the programming and services we provide.



Our Vision, Mission, Goals & Values

Vision

Inspiring a life long interest in science in children and youth. Creating a greater awareness and understanding of science and the scientific community among the public.

Mission

To increase science literacy. To connect volunteer scientists, technologists, engineers, and mathematicians with teachers, students and the public to develop and promote scientific and technological literacy.

Goals

- To foster and promote the communication of science and scientific attitudes through all possible channels including the educational systems, the news and broadcast media, public displays and events.
- To stimulate local scientific and associated societies, agencies and businesses to become more involved in and to promote public awareness of science activities and attitudes.
- To serve as a body with which other organizations may liaise and cooperate in order to meet objectives of mutual benefit.

Values

Our organization formed around a core set of values and beliefs that are widely held by our stakeholders and are believed to be of importance to the broader community. These values form the thread that links together our organization, its programs and services that include:

- A passion for science in a non-parochial sense
- Integrity and relevance of science and an understanding and appreciation of how science reacts with the world around us.
- Empowerment through mentoring and sharing of knowledge and experiences.
- Commitment to science and to ESON
- Inspiring curiosity, wonder and innovation



Our Programs and Services

ESON offers a variety of programs to aid and support teachers in their science teaching. Our signature program is “Scientist & Engineers in the Classroom” where volunteers engage students through class presentations and hands-on activities. We provide a range of other services and programs including classroom kits, science workshops, science fair judges, career sessions, field trip assistance, and community events.

Scientists & Engineers-in-the-Classroom

Coming from a diverse cross-section of the scientific community, our presenters volunteer their time, to be in your classroom to provide fun, interactive, and hands-on science presentations to thousands of students yearly. They add depth to the curriculum, give real-world examples, stimulate student thinking, and enlighten students about many science and technology-related careers.

Career Presentations

ESON partners with local universities and colleges to offer in-school career sessions. Students have the opportunity to question working scientists and staff from postsecondary institutions about many aspects of preparing for and working in a science career.

This year, we partnered with the Department of Agriculture at the University of Alberta to offer a series of six presentations for junior high and high school. Lunch hour career sessions presented information to a wide audience, while presentations to Science and CALM classes targeted groups more specifically.

Ask-a-Scientist

This program is designed to open up a dialogue between students, educators and members of the scientific community. A volunteer scientist or engineer replies directly to the questioner.

Science Fair Judges

ESON volunteers judge local and regional science fair events. Our volunteers are often impressed by the ingenuity of the projects they encounter, and the students benefit from an objective and knowledgeable judging and questioning process.



Our Programs and Services

Science Field Trips

Volunteer scientists and engineers act as field trip guides at a wide range of locations (i.e. a local laboratory, the river valley, a plant or factory, a farm). Students observe how science is applied outside the classroom. ESON assists the teacher and fieldtrip guide in coordinating the field trip.

Science Workshops—Teacher Professional Development

ESON is committed to increasing science literacy, at every level of the education process, especially with educators themselves. We offer high quality science workshops to all teachers in the Edmonton area that are grade level based and clearly linked to the Alberta Education science curriculum. Thanks to the generosity of our funding partners, these PD opportunities are highly subsidized and therefore only minimal charges apply.

Classroom Resource Kits

In the last year, ESON has expanded its services to include the development of Science Resource Kits for teachers to use in their classroom. Our resource kits are available to all teachers in the Greater Edmonton area to borrow free of charge. These kits are curriculum based and are designed to help bring a hands-on aspect to the classroom.

Science Kits Currently in Circulation:

- Grade 2: Boats and Buoyancy
- Grade 2: Magnetism
- Grade 2: Small Crawling & Flying Animals
- Grade 3: Rocks and Minerals
- Grade 4: Light and Shadows
- Grade 5: Electricity and Magnetism
- Grade 6: Sky Science

Community Events and Partnerships

ESON collaborates with partners in the local community, developing beneficial relationships and organizing unique events to capitalize on opportunities. These may include community science events, festivals, and competitions.



Message from the Board

It seems every year changes are inevitable and this year is no different. Julia Fielding worked tirelessly last year as the Executive Director of ESON. In November Julia took some well deserved time off for her maternity leave and we were extremely fortunate to be able to bring Carole Newton in as the acting Executive Director for the interim. As always, working the front lines is Elizabeth Dakken, who makes sure that the Science Hotline programs are running smoothly and efficiently. We also welcomed two new members to the Board of Directors - Kathryn O'Grady-Morris (who took over for Darryl Chicak), as the science consultant for Edmonton Catholic Schools and Monica Chahal who joins us from The Lung Association (AB & NWT). ESON is grateful for the unique talents that each one of our Board members and volunteers bring to the network.

ESON takes pride in developing effective and sustainable science outreach opportunities by linking our network of science and engineering specialists with Edmonton area schools and the community. We are dependant on these volunteers; in fact the organization would cease to exist without them. As the demand for our programs and services continues to increase, so does our need to recruit more volunteers. As in previous years, this has been one of the biggest challenges we face. While ensuring that we retain our current volunteers by making them feel valued and supported, innovative partnerships, such as the ASLA – APEGGA merger of classroom outreach programs is certain to expand our volunteer base this upcoming year, allowing us to effectively meet the demand of science outreach in the Edmonton area.

This year ESON was also successful in establishing relationships with a number of other partner organizations including the Alberta Heritage Foundation for Medical Research, and The Lung Association, to provide effective teacher PD opportunities and offer innovative school programs. With further expansion our programming to include classroom kits, five new kits were successfully developed this year covering an even wider range of grades and topics.

2010-11 will be another challenging year with tighter budgets combined with greater demand for the programming and services ESON provides to schools and the community. Fund development is an ongoing important need for our organization and we hope that funding agencies will have the opportunity to share in our enthusiasm. There are a number of new initiatives which need to be taken forward and there is a real need to develop the community work of the network. This will take hard work by all people involved in the network but we look forward to meeting these challenges and taking ESON forward.

Dr. Lucio Gelmini, Chair of ESON



Highlights 2009-2010

- Recruitment of 12 new volunteers, and 2 new board members
- APEGGA merged classroom outreach programs with ASLA. Now to be called Scientists & Engineers-in-the-Classroom, the program will be run by ESON and CSN in the first year.
- Over 700 visits to schools with volunteer scientists and engineers directly interacting with more than 30,000 Edmonton and area students!
- Development of 5 new Science Resource Kits for a total of 7 kits in current circulation. Kits sent to 35 schools and used by over 800 students.
- Offered 4 Teacher PD Workshops in addition to one session at teacher's convention.
- Attended 3 teachers conventions and interacted with over 800 teachers
- New partnerships formed with The Lung Association (AB & NWT), Faculty of Life and Environmental Sciences at the UofA, Alberta Heritage Foundation for Medical Research, Edmonton Aviation Heritage Center, and The Edmonton Telephone Historical Society.
- ESON partnered with The Lung Association to co-host EnviroBLAST (Building Leadership for Action in Schools Today), a pilot air quality and health program for junior high students.
- As part of Science and Technology Week, a series of 5 science demonstrations were offered in Edmonton Libraries .
- Participation in various community events and programs including YMCA summer camps, Telus World of Science summer camps, Northern Alberta Children's Festival and the Young Scientists Conference.
- Over 2000 volunteer hours logged in total
- More than 35,000 students, adults and general public reached through our programming



Financial Position

Revenue

The two main sources of income for ESON in 2009-10 were casino funds and a provincial grant from Alberta Advanced Education & Technology administered by the Alberta Science Literacy Association (ASLA).

Expenses

As a result of an increased level of effort to promote ESON, spending was up from the previous year in Advertising and Promotion. Salaries showed an increase over previous years. This increase reflects the change of the Executive Director position to an employee position.

Overall Total

ESON shows a surplus in funds of \$23,931.

Edmonton Science Outreach Network Statement of Operations:

2009-2010		2008-2009	
Total Revenue	\$149,081	Total Revenue	\$66,657
Total Expenses	\$125,150	Total Expenses	\$81,823
Overall Total	\$23,931	Overall Total	(\$15,166)
Excess (deficiency)		Excess (deficiency)	

Our Supporters

ESON is supported by many. We appreciate the financial and in-kind donations, and services-in-lieu that allow us to offer programs and resources to schools at not cost and teacher workshops at subsidized rates. Thank you to all who make this possible.

Major Funders

Alberta Advanced Education & Technology
 Alberta Science Literacy Association
 Association of Professional Engineers, Geologists, Geophysicists of Alberta (APEGGA)

Donations—In-Kind & Services in Lieu

ESON volunteers
 Edmonton Catholic Schools
 Grant MacEwan University



Partnerships

Increasingly the volunteer sector is acting in collaboration. Organizations which don't work with other will be left behind. ESON embraces opportunities to work with like-minded organizations to further common goals. We are proud to work with:

Alberta Advanced Education & Technology
Alberta Environment
Alberta Innovates
Alberta Science Literacy Association (ASLA)
Alberta Teacher's Association
Alberta Women's Science Network (AWSN)
Alberta's Promise
Association of Professional Engineers, Geologists, Geophysicists of Alberta (APEGGA)
Association of Science & Engineering Technology Professionals (ASET)
Calgary Science Network
Central Alberta Science Network (CASN)
Chemical Institute of Canada (Edmonton Section)
City of Edmonton
Edmonton Catholic Schools
Edmonton Chamber Voluntary Organizations
Edmonton Public Schools
Engineers Without Borders
Global, Environmental and Outdoor Education Council
Grant MacEwan University
Inside Education
Let's Talk Science
Parks in the Classroom – Alberta Parks
Praxis Science and Technology Hotline
SCIBerMENTOR
Science FUNDamentals
Science & Mathematic Education Student's Association (SMESA)
Telus World of Science
The Lung Association (AB & NWT)
University of Alberta
Volunteer Edmonton
Women in Scholarship, Science & Technology (WISEST)



Contact Information

Edmonton Science Outreach Network
c/o Katherine Therrien School
15040 118 Street, Edmonton, AB T5T5X 1Y7

Ph: (780) 448-0055, Fax: (780) 453-2711
Website: www.sciencehotline.ca

Executive Director – Julia Fielding/Carole Newton (acting)
Email: exc_dir@telus.net

Program Coordinator – Elizabeth Dokken
Email: esons@telus.net

Our Board of Directors

Lucio Gelmini—Chair
Chemistry Instructor, Grant MacEwan University

William McGregor—Past Chair
Technology Development, DOW AgroSciences Canada

Ron Kachman—Treasurer
Dean, retired, NAIT

Don Byers—Director & ASLA Board Representative
President, Algold Consultants

Marie Caley—Director
Principal, Edmonton Public Schools

Kathryn O'Grady Morris—Director
Science Consultant, Edmonton Catholic Schools

Monica Chahal—Director
Health Initiatives Manager, The Lung Association (AB & NWT)