# LOOKING BACK MOVING FORWARD

**20 Years of Enhancing Science Learning** | **Annual Report** 2009 – 2010



## 20 Years of Enhancing Science Learning

## SCIENCE ALBERTA FOUNDATION'S IMPACT OVER THE PAST 20 YEARS

- Reached 5.7 million people with science programming.
- Enabled over 1.1 million students in Alberta to learn about science through the hands-on activities in SAF's trunk-sized science crates.
- Developed an award winning series for crate program with 11 crates showcasing Aboriginal Ways of Knowing and traditional science knowledge.
- Created 69 highly-interactive activities and videos for delivery on wonderville.ca.
- Worked collaboratively with 16 communities to celebrate and highlight local science in their community.
- Developed 29 exhibitions and exhibits to tour across the province.

- Organized teacher workshops, and institutes, established four regional hotlines, awarded grants to 13 community groups, developed implementation guides for the K-6 science curriculum, developed content for science camps and science clubs, developed a program for parents and participated in annual Science & Technology weeks.
- Conducted research on Albertans' knowledge and attitude for science, program evaluation, and youth and public engagement in science.
- Benefited from 300,000 hours generously contributed by partners, collaborators and board members.
- Received sustaining support from the Government of Alberta since inception.
- Received ongoing support from corporate partners and donors.

- Established the Science Alberta Charter School, now the Calgary Science School.
- Was a recipient of the Michael Smith Award for Science Promotion, the ASTech Award for Public Awareness, the Best Program Award by the Canadian Association of Science Centers, and the Friend of Education Award by the Alberta School Board Association.
- CEO, Dr. Arlene Ponting was selected as one of Alberta's most influential people by Alberta Venture, one of Canada's 100 Most Powerful Women by the WXN Network and serves on the Natural Science and Engineering Research Council.

## 2009 – 2010 Achievements

#### REACH

- Provided science programming to 797,814 individuals.
- Provided intriguing science programs in 218 communities in Alberta.
- Inspired 127,269 students in Alberta with hands-on activities via the Science-In-A-Crate program.
- Provided 618,145 user sessions on wondervile.ca.
- Toured 12 exhibits to 136 venues in 66 communities for a total reach of 51,912 participants.
- Generated science awareness with media content delivered 2,926,915 times.

#### PROGRAMS

- Created three new and engaging curriculum-related science crates.
   There are now 477 crates, covering 37 different curriculum-related topics.
- Developed four new cutting-edge multi-level wonderville.ca science activities.
- Enhanced wonderville.ca with three new videos featuring science-based careers and interesting science facts.
- Developed a new interactive digital exhibit on nanotechnology for placement in community venues.
- Held annual Science Happens Here program celebrating science in the community of Taber and surrounding area.
- Created a video showcasing local science-based careers that was shown during the Science Happens Here event and continues to be shown on a local cable station.
- Organized two sold-out shows featuring the Discovery Channel's MythBusters, with over 2,000 in attendance.

#### PARTNERS

- Worked with 8,444 volunteers, collaborators, partners and board members who contributed 37,897 hours of their time.
- Secured \$1,169,460 in grants from donors and sponsors.
- Received \$1,382,919 in in-kind contributions.

## Message from the Board Chair and Chief Executive Officer





The changes and advancements that have occurred in science and technology over the past 20 years are astounding. There are materials, applications and careers in these fields that are commonplace today, but were not even conceived of when Science Alberta Foundation was first established.

In this annual report, *Looking Back*, *Moving Forward*, we shine a light on the accomplishments of Science Alberta Foundation over the past 20 years. We are proud of our solid reputation for designing and delivering highquality, hands-on, minds-on educational programs for children and youth. Through these programs, we have advanced learning and an awareness of science and technology, and related careers for over 5.7 million people in 20 years.

The measurement of our success is the popularity of our programs and their extensive reach across the province and beyond. We know that science and technology, education requirements, and learning strategies and tools are constantly changing and that we must be equally responsive and adaptable. This past year, we conducted a thorough review of our programs by consulting with our stakeholders, investing in research and seeking expert advice on future trends. Our goal is to continuously improve, to meet unmet needs and to be innovative and focused.

Alberta's economic future is increasingly dependent upon having sufficient knowledge workers with expertise in science and technology and a population that can make informed decisions about science issues. For the past 20 years, Science Alberta Foundation has developed programs that enable participants to develop critical thinking skills, be curious and have a healthy scepticism about science and what they read and hear.

We must home grow our talent so our children, grandchildren, nieces and nephews can successfully compete for jobs in the future. Statistics show that the major growth will be in science and technology intensive jobs. These jobs are fascinating and range from air pilots to software engineers and many more. But how do youth, parents and teachers keep abreast of new career opportunities? Our programs highlight the jobs that use the science that is learned and our career videos are a favourite destination on wonderville.ca.

It has been an exciting and satisfying journey over the past 20 years. Working from a solid foundation, Science Alberta Foundation is well positioned to move forward and address the changes and advancements in science and technology for the next 20 years.

**Art Froehlich** Board Chair

Arlene I. Ponting, PhD Chief Executive Officer



Wonderville.ca

Making Waves: Hearing and Sound, Grade 3 Science-In-A-Crate

Follow this timeline to journey through 20 years of great accomplishments.



#### LOOKING BACK: 20 YEARS OF ENHANCING SCIENCE LEARNING

Science Alberta Foundation was formed by committed community leaders across the province who partnered with individuals, organizations, corporations and government to pilot an innovative approach to promote science awareness and science literacy as the foundation on which Alberta could grow and prosper in an increasingly technological world.

## About Science Alberta Foundation

Over 20 years, Science Alberta Foundation has impacted more than 5.7 million people with Science Learnings.

Science Alberta Foundation responds to emerging trends and needs. Science Alberta Foundation is a non-profit organization committed to increasing science literacy and awareness. We develop innovative hands-on and digital programs that reach all Albertans. Our programs motivate children, youth and families to embrace lifelong science and technology learning. We are helping to create tomorrow's knowledge workers and instil an appreciation of science in a new generation of Albertans.

Science Alberta Foundation brings science to the people. Through community events, television, newspapers, radio, computers and classrooms, our science programs demonstrate how science, engineering and technology are relevant in everyday life. Our programs are designed for use in the home, classroom or community. They are used in the largest cities and smallest towns in every corner of the province.

By drawing on familiar topics and concepts, Science Alberta Foundation creates programs that help demonstrate how the fundamentals of science really work in the world around us. Our programs encourage youth, parents and educators to be inquisitive. They encourage them to develop critical thinking skills, interpret results and make decisions based on fact.

## Looking Back: 20 Years of Enhancing Science Learning

Twenty years ago, community leaders across the province were concerned about Alberta's ability to compete in a global economy based on achievements in science and technology and they predicted a shortage of human capital in critical employment fields. Mr. Jim Gray, who championed the formation of SAF, proposed the concept of a provincial network of science centres.

In January 1990, SAF was established with a talented, province-wide Board of Directors. Anne Tingle was appointed Executive Director. After 22,000 signatures from Albertans were collected in support of the concept, the Governments of Alberta and Canada provided funds to conduct a feasibility study. This study revealed that Albertans wanted programs that could use existing facilities resulting in a shift from "bricks and mortar" to "people and programs." This model is still key to SAF's success resulting in programs that are cost effective, scalable and province-wide.

A pilot project was conducted from 1991 to 1993, funded by the provincial government, the federal government and the private sector. A robust evaluation provided very positive outcomes resulting in support from the Government of Alberta. The following years were filled with much excitement, creativity and hard work. Initial programs included exhibitions, crates, teacher resources, teacher institutes, resources for families, a program for disadvantaged children, a CD-ROM, science festivals and the Science Alberta charter school which is now an independent entity called the Calgary Science School.

In 1999, A. Bernard Coady became Chairman and Dr. Arlene Ponting became the Chief Executive Officer. The Board of Directors entered an intensive planning process to develop a five-year strategic plan. This plan provided the blue print for taking the foundation to the next level.

Since that time, SAF has expanded existing programs, implemented new ones and eliminated others. The crate program expanded from 35 to over 400 crates, and was an exemplar program with hands-on and relevant activities. SAF immediately embraced the internet as an effective and amazing channel to reach youth and as a result Wonderville was created. It quickly became a first-class site with awards and visitors worldwide. New content is added each year and numbers have increased exponentially.



#### 1990

Science Alberta Foundation is established to help develop the critical science consciousness Albertans need to make informed decisions and to encourage youth to consider careers in science and technology. SAF organized a Celebration of Science in collaboration with APEGGA for Alberta's Centennial. Our large travelling exhibitions were modified to smaller exhibits that could be more adequately placed in libraries and community venues across the province. Festivals of science were modified for delivery by traditional and new media with a culminating event featuring the Discovery Channel's MythBusters.

In 2007, SAF conducted the Trajectory Project, which measured Albertans' attitudes and support for science and technology, commissioned a valuable overview of science literacy and organized a thought leader's summit in Banff to determine what future programs in science promotion and learning should be in order to enhance the science culture in Alberta. The Board embarked on another strategic planning process, and a new strategic plan and business plan were approved in 2007.

Since that time, SAF has focused on being a leader in the advancement of youth and public engagement in science. The organization placed a priority on organizational excellence and sustainability and initiated aggressive growth plans. These plans were scaled back because of the economic downturn; however because of our distributed model, we were able to increase our reach to 797,814 people last year. This is remarkable and attests to the efficient model of SAF. In addition, actions and plans were put in place to ensure SAF emerges from the recession strong and ready to grow again. The hallmark of our success has been innovation, quality programs, extensive reach, cost effectiveness, collaboration, responsiveness, ongoing government support, strong corporate support and a passion for science, youth, and excellence. These elements are in our DNA and will ensure success in the next twenty years.

Our programs allow people of all ages to engage in science that is relevant, meaningful and fun. **Now that is success!** 

> IT WAS COOL THAT WE COULD DO FOOTWEAR IMPRESSIONS AND DO TESTS LIKE THE REAL SCIENTISTS DO AND IT WAS FUN TO GET A NEW PIECE OF EVIDENCE EACH DAY AND PREDICT WHO DID IT.

#### Student,

The Griffin Inquest Science-In-A-Crate, A Lesson On Evidence and Investigation MY STUDENTS FOUND THE ACTIVITIES VERY ENGAGING AND REALLY LEARNED A LOT. I WILL BOOK THIS CRATE AGAIN!

**Light and Shadows** Keephills Elementary School, Duffield



Griffin Inquest, Grade 6, Science-In-A-Crate



Ways of Knowing: Stories of the linii, Grade 3 Science-In-A-Crate

#### 1991

Minister of Education, the Honourable Jim Dinning shows his support, saying "Increasing the opportunities for Alberta students to interact with science is a great complement to their formal science education."



**1992** Science Alberta Foundation establishes 4 regional science councils and 4 science hotlines.

### The Year in Review: Our Education Programs

#### SCIENCE CRATES CONTINUE TO BE EXTREMELY HELPFUL IN BRINGING LIFE TO THE SCIENCE CURRICULUM. THANK YOU FOR YOUR WORK WITH MAKING SCIENCE LEARNING 'HANDS ON' AND INTERESTING FOR ALL LEVELS.

**Teacher**, Calgary, MidSun School

#### THIS PROVIDES A WELL-ROUNDED AND HANDS-ON OPPORTUNITY FOR MY CLASS. I LIKED HOW VARIED THE STATIONS WERE! THANK YOU!

Math-A-Magic Teacher, St Brendan School, Edmonton

#### Science-In-A-Crate

Science-In-A-Crate delivers a wealth of curriculum-related resources right to the classroom. Each crate includes hands-on activities that engage learners in scientific inquiry and problem-solving. Unique tools, customized models and difficult to access equipment are included to further support science learning. Additionally, the principles and methods of instruction model best practices for good science instruction.

The topics for new crates are determined by conducting focus groups and tracking requests we receive for science curriculum that is not yet covered in a current crate. Crates are developed in partnership with subject-specialists and our own internal education specialist. Upon development, crates are tested with teachers and students to ensure all intended learning outcomes are successfully achieved. Once the crate is ready, it is made available for rental through our online booking system (bookings.sciencealberta.org).

This year's new crates are:

## Aboriginal Ways of Knowing: Sharing our Environment

Young children are natural scientists, and this crate encourages that ability. Designed for Kindergarten, this crate fosters students' curiosity and willingness to learn about the environment by exploring, investigating and questioning the world around them. Students will discover and deepen their understanding about the environments they investigate, the different ways natural and human-made things in our environment interact, explore how they are a part of the environment and question their role within the environment.

Developed in partnership with Nexen Inc. and APEGGA.

## Whoops: Unexpected Discoveries in Chemical Engineering

Designed for grade five, this crate uses popular items (like popsicles and Silly Putty<sup>®</sup>) to explain the chemistry behind their accidental discovery.

Students are encouraged to inquire and problem solve while developing their skill and confidence in investigating. By completing the experiments introduced by chemical engineers and their "whoops" discoveries, students learn about chemical properties, reactions, interactions and the diverse world of chemical engineering.

Developed in partnership with ConocoPhillips and APEGGA.

#### F.A.R.M.S: Farm Animal Relationship Monitoring System

Jo's Farm is a fictional Alberta farm that is coming alive in the classroom. With seven hands-on activity centres, this crate immerses grade three students into farm life where they help Jo observe some common and not-so-common animals found on her farm. Students discover and deepen their understanding about animals, including animal adaptation to different environments, life cycles and requirements for their care. The students' trip to the farm will help them better understand animal life cycles, especially by seeing it through a relevant, relatable story line.

Developed in partnership with Imperial Oil Foundation and AFSC.

Since 1993, nearly 1.1 million students have interacted with our Science-In-A-Crate program.





#### 1993

Science Alberta becomes known as "a science centre without walls" by touring exhibitions and science crates to all corners of the province.



### 1994

The prestigious Michael Smith Award for Science Promotion and the ASTech Award for Public Awareness are awarded to Science Alberta Foundation.

#### Wonderville.ca

Wonderville.ca is an award winning, child friendly website that teaches science in a relevant, meaningful and fun manner. With a wide variety of games, activities and videos children see real life applications of the science they are learning.

This year's new games are:

#### Space Ranch

Space Ranch puts players in the position of a farmer in outer space. By completing tasks like feeding, watering and cleaning up after the chickens and cows, players encourage the animals to produce eggs and milk. From the farm, players take the eggs and milk into production – where they learn about tasks like washing eggs and pasteurizing milk.

While the game puts a futuristic spin on agriculture and has all the bells and whistles you'd expect from a video game – including secrets to unlock, children are learning about the science and technology that is the basis of farming.

Developed in partnership with Alberta Egg Producers, Alberta Milk and ALMA.

#### Dirt on Soil

Dirt on Soil, a crop life game that turns youth into a farmer where they learn about crops, soils and pests.

Wrapped up in the story line of young Kelvin coming to the farm to help his

Grandpa Kel, players learn how to grow and care for crops alongside Kelvin. After Kelvin graduates from his tutorial, Grandpa Kel gives him a special utility belt. Kelvin uses this belt to take soil samples, water and fertilize the crops and consult his field guide.

Each level of the game is played with a different crop in a different type of soil. With ten types of crops and four types of soil, there are plenty of combinations to keep this game fresh and challenging. Add in the variations of weather conditions and pest infestations and no two games will be the same.

Developed in partnership with ACIDF.

#### Flight of the Kelvins

Flight of the Kelvins is a game that demonstrates not only the scale but also the potential benefits of nanotechnology in our lives. Infected by numerous pathogens, the Mayor of Wonderville has been injected with nanotechnology in the form of tiny nano robots that traverse his body. Players experience the benefits of nanotechnology, specifically in the medical field, while traveling through the infected body in the nano-bot. With the ability to scan and identify many elements of the game world, players can compare the size of nanotechnology and strategically target all bad pathogens. This game asks "Can you help Kelvin chase down the viruses before they spread?"

Developed in partnership with Alberta Ingenuity Fund. This year's new videos are:

#### Do you know what Nano means?

This four minute animation introduces a young audience to the nano scale. Using a single strand of hair as a reference point, the animated character shrinks to the size of a red blood cell and then even smaller – the size of a rhinovirus. Understanding the scale of nanotechnology helps viewers recognize that even the smallest parts of our body are made up of even smaller components, nanomaterials.

Developed in partnership with Alberta Ingenuity Fund.

## So what can you do with Nanotechnology?

This four minute animation introduces a young audience to the diverse careers related to nano science. It takes viewers on a nano adventure revealing how nanomaterials enhance products in our everyday life. Viewers learn that nanotechnology is an emerging interdisciplinary field that includes physical science, chemistry, physics, biology, environmental sciences and engineering.

Developed in partnership with Alberta Ingenuity Fund.

#### **Biodiversity**

Within the vast differences of the landscapes all over the world there is a rich mixture of living things. This is biodiversity. And biodiversity doesn't just exist at the level we can see. This video drills down to the microscopic level of biodiversity and encourages the next generation of scientist to further explore the implications of biodiversity and entomology, the study of insects.

Developed in partnership with ACIDF.

#### I LOVED THE ACTIVITIES AND THE SITE IS GOOD. I SORT OF TOLD EVERYONE IN MY CLASS (ABOUT IT).

Youth feedback response on wonderville.ca

There have been over 4.4 million visits to wonderville.ca. Youth are experiencing relevant science learning in the context of fun and engaging games.

#### 1995

Let's Do Science and Backyard Safari highlight Science Alberta Foundation's venture into educational publications.

#### 1996

The new community science festival program is launched in High River and Medicine Hat with the goal of empowering communities to celebrate local achievements in science and technology and showcase local science-intensive careers.

#### **Science Happens Here**

Science Happens Here is a community program that highlights the science that makes the community tick. Working closely with community members, a sense of pride is stimulated in the community as they learn about new, novel or tried and true applications of science and technology. Residents are intrigued and challenged to think about the science around them and the careers that make it possible.

This year, Science Happens Here happened in the Taber/Lethbridge area. There were community contests, school contests, science learning print pieces, media articles, as well as a career video. The program was capped off with the ever popular Discovery Channel MythBusters' show. Once again the duo, Grant Imahara and Tory Belleci, spoke to a sold out crowd encouraging youth to be knowledge seekers. The "Chem Profs" from University of Lethbridge warmed the crowd up at the University of Lethbridge show, and the winners of the school contest were honoured at the Taber show. In Taber, Science Happens Here engaged two youths, Jeff Oudman and Curtis Huisman, from the local high school to take an active part in the career video production. The students had shown a strong interest in videography and had really proven themselves with their dedication and submissions to film contests. Both commented that they really learned a lot from working with a professional and using the technology/ equipment that the industry depends upon.

The career video, which highlights careers in kinesiology, floristry, agriculture and wind-powered energy, has been picked up by a local cable station and will be aired weekly for one year.

A local magazine wrote and published a three page story on the Science Happens Here program, Science Alberta Foundation and the Discovery Channel's MythBusters show. Through this publication, with an initial distribution of 48,000, numerous Albertans in the Taber/Lethbridge area will learn about science that is local to their region. In total, the program earned 205,000

For over 10 years, Science Alberta Foundation has been highlighting local science and local science careers in communities around the province including: Fort McMurray, Lethbridge, Fort McKay, Medicine Hat, Fort Chipewyan, Grand Prairie, Taber, Edson and Hinton. media impressions, sharing articles like "what is the science in the Olympic torch" with the residences in a timely manner (as the torch ran through their town).

Sharing the news about local science did not end when the program concluded. Several local papers have agreed to continue running science articles on our behalf, and community members can explore science on wonderville.ca year round.

Presenting sponsor: Suncor Energy Foundation Community Partners: University of Lethbridge and 1st Choice Savings.



Students, Jeff and Curtis, helped produce the program's career video.



Winners of school science contest pose with the MythBusters, Tory and Grant.



#### 1997

Murder in a Minor Key, science exhibit, finalist for the Peter F. Drucker Award for Non-Profit Innovation.

#### 1998

- Ways of Knowing: Aboriginal Crate Series is initiated to honour and acknowledge traditional ways of knowing and introduce students to the ways in which science is a component of traditional Aboriginal culture.
- A large-scale traveling exhibition on teen health, entitled body Image, is developed.

#### **School Science Leaders**

School Science Leaders is a one-of-akind program in Canada that provides professional learning for teachers and facilitates best practices in science instruction. In 2009 it operated in K-12 public, separate, charter and private schools in four Alberta regions.

In addition to attending year round workshops, school science leaders are encouraged to share their learnings with their colleagues. Last year, these four regions made use of more than 500 crates to assist in their in-classroom teachings and engage their students.

School Science Leaders facilitated the attendance of two participants at the National Science Teacher Association National Conference. This year's conference was held in Philadelphia, and both participants commented that they returned home with an almost overwhelming amount of information and ideas.

Wood Buffalo region, sponsored by Syncrude Canada Ltd.

Battle River region, sponsored by Enbridge Inc.

I have already used my new skills to increase the number of science experiences available to my students through additional labs and experiments. I hope that this will amplify the interest and enthusiasm of my students related to possible careers in science and engineering.

Adam Madsen, School Science Leader, NSTA Participant

#### **Interactive Digital Exhibits**

Interactive Digital Exhibits are stand-alone arcade-style kiosks that travel throughout the province to community venues. Each digital activity engages participants in a competitive and challenging manner; the excitement is often contagious and encourages onlookers. Intriguing science content is provided throughout the activity and participants learn the science concepts required to succeed in the game.

This year our twelve exhibits, ranging in topics from agriculture to sports and energy, travelled to 136 venues in 66 communities for a total of 51,912 players.

This year's new exhibit is:

#### Flight of the Kelvins

Developed from the Wonderville game, this version of Flight of the Kelvins provides similar learnings in a shorter time period of game play.

Flight of the Kelvins demonstrates not only the scale but also the potential benefits of nanotechnology in our lives. Infected by numerous pathogens, the Mayor of Wonderville has been injected with nanotechnology in the form of tiny nano robots that traverse his body.

Players experience the benefits of nanotechnology, specifically in the medical field, while traveling through the infected body in the nano-bot. With the ability to scan and identify many elements of the game world, players can compare the size of nanotechnology and strategically target all bad pathogens.

Developed in partnership with Alberta Ingenuity Fund

> TO CAMROSE WITH AN ALMOST OVERWHELMING AMOUNT OF INFORMATION AND IDEAS FOR THE CLASSROOM, AS WELL AS THE ENTHUSIASM TO DO EVERYTHING I CAN TO HELP MY STUDENTS BECOME BETTER SCIENTIFIC THINKERS BY PROVIDING MORE OPPORTUNITIES FOR HANDS-ON LEARNING.

**Tina Olson,** School Science Leader, NSTA Participant



Flight of the Kelvins, travelling exhibit





#### 1999

• Doors open to the Science Alberta Charter School (now the Calgary Science School), which offers an enriched program in science and mathematics.

• Mr. Bernie Coady becomes the Chairman of the Board of Director and Dr. Arlene Ponting becomes the Chief Executive Officer.

#### 2000

In a timely response, a travelling exhibition on the treatment of drinking water is released within weeks of a crisis that saw a town's drinking water become contaminated.

## The Year in Review: Leadership

Science Alberta Foundation strives to be a centre of excellence for the advancement of science literacy. In recognition of our leadership and influence in Alberta and beyond, we received numerous accolades and invitations.

Chief Executive Officer, Dr. Arlene Ponting, was named as one of Canada's Most Powerful Women: Top 100 by the Women's Executive Network.

Canada's Most Powerful Women: Top 100 Award honours women who are proven achievers in the private, public and notfor-profit sectors. Dr. Arlene Ponting was recognized in the category of Trailblazers & Trendsetters for her dedication and achievement in advancing science literacy. In addition to receiving the award, Arlene has been invited to speak at a number of Women's Executive Network functions including one that examined the knowledge-based economy, where people are our greatest asset and applying intellect can be a product and a tool in helping businesses grow.

## Science Alberta Foundation facilitated astronaut Dr. Bob Thirsk's presentation to Alberta high school students.

With more than 900 students packed into Lord Beaverbrook high school's gym, and thousands more around the province via video conferencing, Dr. Thirsk recounted his experience on the International Space Station to a riveted crowd. During his talk, Dr. Thirsk really challenged the students. He attended an Alberta school, he had big dreams and so should they. When asked what he thought the next development for space travel should be, he turned it back to the students – asking them to consider how interplanetary travel could be possible. What inventions do the students of today have to work on to allow astronauts to stay in flight for years at a time? Is there a student out there that will determine how to use photosynthesis to recycle the air, thereby reducing that limitation to space travel?



CEO Dr. Arlene Ponting and Canadian astronaut Dr. Bob Thirsk

Much like Science Alberta Foundation, Dr. Thirsk feels it is important to "turn on" our youth to the possibilities of a science and technology-based career. So along with Dr. Thirsk, we encourage students to do well in science and math, take as many courses as they can, and keep their options open to create their own future. There will be careers out there that we do not even know about now. What we do know is the greatest growth in jobs is in the science and technology fields

#### Science-In-A-Crate and School Science Leaders Program acclaimed as beneficial by recognized researcher.

Ann Sherman, Vice Dean of the Faculty of Education at the University of Calgary, conducted a qualitative research study focused on the use of Science Alberta Foundation's Science-In-A-Crate resource and the School Science Leader program. Overall, comments about the crates and the School Science Leaders program were positive. The paper, which resulted from this study, was submitted for consideration to the American Educational Research Association. It was accepted for presentation at the 2010 AERA Annual Meeting. As a round table discussion, Ann Sherman and Hyacinth Schaeffer were able to interact closely with participants and have more intimate conversations about the study.

#### 2001

New programs are launched including a traveling exhibit on the science and technology in the forestry industry, a community festival in Fort McKay and a balanced website on climate change.



#### 2002

Wonderville.ca, an innovative, award-winning website, launches and leads the way in online science learning – providing visitors with an awesome science learning experience.

## Science Alberta Foundation was selected to participate in WorldSkills 2009

Hailed as the pinnacle of global skills, trades and technology competition – over 900 international competitors competed simultaneously in 45 skill categories during World Skills 2009. Science Alberta Foundation was selected as one of only two nonprofits to attend, and as such was in optimal position to share interactive digital exhibits and career-related demonstrations with an expected 150,000 participants. As one of the most popular booths at the competition participants walked away knowing science is cool, interesting and fun.

In addition to these mentions, Science Alberta Foundation demonstrates leadership in its vision, mission, programs and implementation strategies. We unleash innovation through our science programs that are designed to build capacity. The programs extend knowledge and foster positive attitudes towards science. They are shipped around the province and accessed beyond the provincial borders. Our model is simple, efficient and cost-effective, accountable and visionary.



Career demonstration at WorldSkills to show how graphic designers use technology to develop games, like those on wonderville.ca

### 2003

- A unique program for Continuing Professional Learning for teachers was developed and included in each science crate in circulation
- Modular science exhibits, a brand new concept is developed to meet the needs of small libraries and other host facilities.



2004

#### Canadian Association of Science Centres selects Science Alberta Foundation's "Aboriginal Ways of Knowing" science program as the best program in Canada

#### 2009-2010 Science Alberta Foundation, Board of Directors

Left to right, front row: Tim Schultz, Linda Palladino, Barbara Conkie, Art Froehlich, Brad Klak, Dr. Arlene Ponting, Don Bell. Second row: Geoff Mackey, Paul Clark, Doug Annable, Steven Gaudet, Dr. Larry Payne, Brian Hildebrand, Greg Thomas. Back row: Gordon Olsen, Claude Mindorff, Robert Pockar, Geoff Thompson

#### 2005

Science Alberta Foundation partners with The Association of Professional Engineers, Geologists and Geophysicists of Alberta (APEGGA) to develop a program to celebrate 100 years of innovation in science and technology as part the Alberta's Centennial.



#### 2006

Foundation organizes the Trajectory Project, which includes a literature review of science literacy, a survey of Albertans by Ipsos-Reid and a gathering of Thought Leaders to envision what stellar science learning and promotion program should be.

## Science Alberta Board of Directors

#### **Executive Committee**

Art Froehlich (Chair) Calgary, AdFarm

Linda Palladino (Vice-Chair) Edmonton, Enbridge Pipelines Inc.

**Brad Klak (Secretary/Treasurer)** Lacombe, Agriculture Financial Services Corporation

**Tim Schultz (Government of Alberta Representative)** Edmonton, Advanced Education and Technology

Arlene Ponting (CEO) Calgary, Science Alberta Foundation

#### Directors

**Doug Annable** Calgary, CD Consulting

**Don Bell** Calgary, WestJet Founder, retired

**Stephen Burns** Calgary, Bennett Jones LLP

Paul R. Clark Cochrane, Ripley Canyon Resources Ltd.

Barbara Conkie Calgary, Conkie Communications **Steven Gaudet** Fort McMurray, Syncrude Canada Ltd.

**Brian Hildebrand** Foremost, Brian Hildebrand Farms Ltd.

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**Dr. David Lynch** Edmonton, University of Alberta

Geoff Mackey Calgary, retired

**Claude Mindorff** Medicine Hat, Mainstream Renewable Power LLC.

Gordon Olsen Calgary, GOA Inc.

Vaughn Paul Edmonton, The First Nations (AB) Technical Services Advisory Group

**Dr. Larry Payne** Camrose, Superintendent, Battle River Regional School Division

**Robert M. Pockar** Calgary, Matrix Solutions Inc.

Kerry Rudd Edmonton, Associated Engineering C.E. (Chuck) Shultz Calgary, Dauntless Energy

**J. Greg Thomas** Rocky Mountain House, retired

**Geoff Thompson** Calgary, Cardel Group

Board Members that retired in 2009-10

Jennifer Lowry Edmonton, EPCOR Utilities Inc.

**Doug Golosky** Fort McMurray, Golosky Group

2007

The Science Challenge program is expanded to grades 7, 8 and 9 with over 860 students competing.



2008

• Science Happens Here program in Edmonton and Grande Prairie launches to sold out crowds with partners Discovery Channel's MythBusters

CEO Arlene Ponting is selected by Alberta Venture as one of the 50 Most Influential People in Alberta.
Science Alberta Foundation forms a ten-year partnership with Alberta Ingenuity Fund.

## 2009 – 2010 Sponsors and Donors

We are grateful for the support of all our sponsors and donors, including those who have remained anonymous and those who have contributed over a number of years.

Special thanks to:



This list of sponsors reflects support specific to 2009-2010 programs. We recognize that the life of a program can last multiple years, for a complete list please see www.sciencealberta.org/supporters/ sponsors.

- 1st Choice Savings and Credit Union
- ACIDF (Alberta Crop Industry Development Fund)
- AFSC (Agriculture Financial Services Corporation)
- Alberta Canola Producers Commission
- Alberta Culture and Community Spirit
- Alberta Egg Producers
- Alberta Employment and Immigration
- Alberta Ingenuity Fund
- Alberta Milk
- ALMA (Alberta Livestock Meat Agency)

- APEGGA (The Association of Professional Engineers, Geologists and Geophysicists of Alberta)
- Bezooyen Contracting Inc.
- Bruce Power
- Cardel Homes
- ConocoPhillips Canada
- Enbridge Inc.
- Enhance Energy Inc.
- Imperial Oil Foundation
- Neufeld Petroleum and Propane Ltd. (Taber)
- Nexen Inc.
- Potato Growers of Alberta
- PromoScience Research Council of Canada
- Suncor Energy Foundation
- Syncrude Canada Ltd.
- The Taber Times
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We are grateful for the support of the following donors.

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#### 2009

Science Alberta Foundation represents one of the two non-profits attending World Skills 2009, a global skills, trades and technology competition. This provided opportunity to highlight science learning on the international stage to over 150,000 participants.

#### 2010

Science Alberta Foundation celebrates its 20th Anniversary.

## Auditor's Report on Financial **Statements**

To the Directors of **Science Alberta Foundation**  The accompanying summarized statements of financial position, operations and net assets and changes in cash resources are derived from the complete financial statements of Science Alberta Foundation as at March 31, 2010 and for the year then ended on which we expressed an opinion without reservation in our report dated May 20, 2010. The fair summarization of the complete financial statements is the responsibility of management. Our responsibility, in accordance with the applicable Assurance Guideline of the Canadian Institute of Chartered Accountants, is to report on the summarized financial statements.

In our opinion, the accompanying financial statements fairly summarize, in all material respects, the related complete financial statements in accordance with the criteria described in the Guideline referred to above.

These summarized financial statements do not contain all the disclosures required by Canadian generally accepted accounting principles. Readers are cautioned that these statements may not be appropriate for their purposes. For more information on the Foundation's financial position, results of operation and cash flows, reference should be made to the related complete financial statements.

Mackay LLP Calgary, Canada May 20, 2010

Chartered Accountants

Summarized Statement of Financial Position	<b>ASSETS</b> Cash and Term Deposits Other current assets Property and equipment Long term investment Total Assets	<b>2010</b> \$ 2,110,172 157,155 <u>65,323</u> <u>50,050</u> \$ 2,382,700	2009 (restated) \$ 2,485,713 83,165 32,141 50,050 \$ 2,651,069
As at March 31, 2010	<b>LIABILITIES</b> Accounts payable & accrued liabilities Deferred contributions Total Liabilities	\$ 254,681 	\$ 359,947 
	<b>NET ASSETS</b> Invested in property and equipment Restricted Unrestricetd Total Net Assets Total Liabilities and Net Assets	\$ 65,323 685,000 <u>158,047</u> <u>908,370</u> \$ 2,382,700	\$32,141 685,000 175,809 892,950 \$2,651,069

SUMMARIZED STATEMENT OF			2010	20	009 (restated)
	<b>REVENUES</b> Alberta Advanced Education and Technology	\$	1,300,000	\$	1,500,000
ASSETS FOR THE YEAR	Project Grants	Ψ	1,169,423	¢	1,278,544
ENDED MARCH 31, 2010	Other income		148,552		158,810
	Total Revenue	\$	2,617,975	\$	2,937,354
	<b>EXPENDITURES</b> Science literacy & learning Science Awareness & communication		689,131 983,899		812,182 1,206,421
	Leadership and exploration forums		118,467		104,726
	Partnerships, relationships and collaborations		47,873		42,404
	Resource development		266,097		243,831
	Administration		239,818		267,446
	Infrastructure		153,491		156,205
	Governance and audit		71,927		72,784
	Continuous learning & improvement		31,852		20,727
	Total Expenditures	\$	2,602,555	\$	2,926,726
	Excess of revenues over expenditures	\$	15,420	\$	10,628
	Net Assets, beginning of year Prior period adjustment		892,950		832,272 50,050
	Net Assets, beginning of year, as restated		892,950		882,322
	Net Assets, end of year	\$	908,370	\$	892,950
			2010	20	009 (restated)
SUMMARIZED STATEMENT OF CASH FLOWS FOR THE YEAR	Cash used from operating activities	\$	(313,855)	\$	(69,603)
ENDED MARCH 31, 2010	Cash used to purchase property & equipment	Ŧ	(61,686)	Ŧ	(15,722)
LINDED WARGET 51, 2010	Net decrease in cash during the year		(375,541)		(85,325)
	Cash & Term Deposits Beginning of Year		2,485,713		2,571,038
	Cash & Term Deposits End of Year	\$	2,110,172	\$	2,485,713

## LOOKING BACK **FORWARD**

In 2010-2011, the year of our 20th Anniversary, Science Alberta Foundation will move forward – responding to emerging trends and needs and addressing changes and advancements in science and technology.

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