



Wings

New Bondar Challenges ~ Schools, Summer Camps and Wilderness

www.therobertabondarfoundation.org



Milestones

- 2009 The Roberta Bondar Foundation receives Charitable Status, Canada
- 2010 The Official Launch of the Travelling Exhibition and Learning Experience on biodiversity
- 2011 The Official Launch of the Bondar Challenge, first pilots in schools
- 2012 Through partnerships, first Wilderness Challenge delivered and programs expanded to summer camps for youth

Bondar Challenge

In summer 2012, The Roberta Bondar Foundation partnered with the Canadian Camping Association in a successful pilot project to launch the Bondar Challenge in Ontario summer camps for youth. In 2013, all camps across Canada will have the opportunity to participate in the Bondar Challenge, a unique environmental photography program. Capturing an image in a summer camp environment that relates to some aspect of biodiversity, participants interpret the artistic and scientific components of the photograph that they have taken in a written Artist's Statement, challenging their imagination and creativity.



Sweetgrass Station in Wood Buffalo National Park of Canada ~the site of the 2012 Wilderness Bondar Challenge

Grade 7 & 8 students from P. W. Kaeser High School in Fort Smith, NT travelled by bus, boat and foot for over six hours to reach their camping site near the Athabasca Delta where biomes of forest, wetlands and rivers meet to form an area of cultural and natural importance (see below for more details).



Photo credits:



Bondar Challenge



Student Winners

Seeing Science Through Art

The Roberta Bondar Foundation Fuses Art, to Promote Creativity, with Science, to Enhance Understanding

Music of the Spheres

With the Amadeus Choir and Elmer Iseler Singers under the direction of Conductor Lydia Adams, The Roberta Bondar Foundation collaborated for Earth Day in the fusion of music, art and science at the Ontario Science Centre, Toronto, April 22 2012, in the concert "Music of the Spheres!". The projected images from The RBF's Travelling Exhibition included Desert and Ice Across Biomes. Dr. Bondar created

and read lyrics for a new composition, "Beyond Earth" by Lydia Adams, and also spoke about our relationship to Earth and to our natural environment.

Walrus Talks

On October 10 at the Art Gallery of Ontario, Dr. Bondar was one of a small group of distinguished Torontonians who were invited to present a lively thought provoking talk on "Art in the City". Speaking to "Art and Ecology", Dr. Bondar used images of Earth from space to

illustrate the connectedness of cities and images from the Bondar Challenge ~ promoting connectedness to the natural world.

Boris Brott Music Education Concert

At Hamilton Place, October 23, Dr. Bondar joined Maestro Boris Brott in a multi-media concert for several hundred students in celebration of the 20th anniversary of her historic spaceflight. Dr. Bondar spoke about the environment and the Bondar Challenge.

EcoSeek ~ Seeing, Believing, Creating, Caring



Photo credit: Bondar Challenge Student Winner



A first time camping experience for many, students from Fort Smith were bused for an hour to the Peace River where a Parks Canada boat transported them for two hours, then a 12 km hike through the wilderness. "It's a unique opportunity to have a retreat-like experience, that combines learning about Aboriginal culture, biology and landscapes and also having a bit of that spiritual experience as well," said Pierre Meagher from the Fort

McMurray Public School District. "The educational elements of the camp tie into various core subjects of the elementary and high school curriculum. This brings a realness to students that couldn't be adequately translated through a handout or textbook." Students were given cameras, taught various elements of photography and given free reign to photograph nature. Back at the school they wrote their artist's statements to accompany the photographs and submitted them to The Roberta Bondar Foundation to be judged by a panel of artists, photographers and scientists.



Photo credit: Sgt Ronald Duchesne, Rideau Hall
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The Travelling Exhibition's new Host Gallery

The Art Gallery of Algoma,
Sault Ste. Marie ON, welcomes
His Excellency
the Right Honourable David Johnston,
C.C., C.M.M., C.O.M., C.D.
Governor General of Canada
and
Her Excellency Sharon Johnston, C.C.

The Art Gallery of Algoma (AGA) is the new host gallery for the RBF's Travelling Exhibition and Learning Experience. In August, 2012, Director Jasmina Jovanovic welcomed Their Excellencies, the Right Honourable David Johnston, Governor General of Canada and Mrs. Sharon Johnston, to view a special exhibition of works entitled, "Within the Landscape ~ Art Respecting Life", from The Roberta Bondar Foundation's Travelling Exhibition and Learning Experience.

Over 40,000 people viewed The RBF's Travelling Exhibition and Learning Experience at First Canadian Place in

Toronto in April 2011. Many students and international visitors attended the exhibition at the Art Gallery of Algoma, Sault Ste. Marie in October 2011, in partnership with the Algoma Fall Festival. Dr. Bondar was able to be present for several of these visits and provided background information to AGA staff and docent training to volunteers.

In January 2012, The Foundation celebrated the 20th anniversary of the Founder's spaceflight that coincided with the 100th anniversary of the Incorporation of the City of Sault Ste. Marie, Dr. Bondar's birthplace and hometown. She spoke to more than 1000 local and area students



Photo credit: Bondar Challenge Student Winner

about the importance of the environment and education.

Creating an emotional bond that will become part of our personal heritage

A fundraiser for The Roberta Bondar Foundation sponsored by the City of Sault Ste. Marie featured both live and silent auctions of space training related items and framed prints, all donated by Dr. Bondar. (continued next page)



AGA Director Jasmina Jovanovic; Dr. Bondar; Education Coordinator Laurie Carlyle; Curator, Miranda Bouchard; Gallery Shop Manager Marjorie Butterfield; The RBF Board Chair & Director, Prof. Bonnie Patterson.

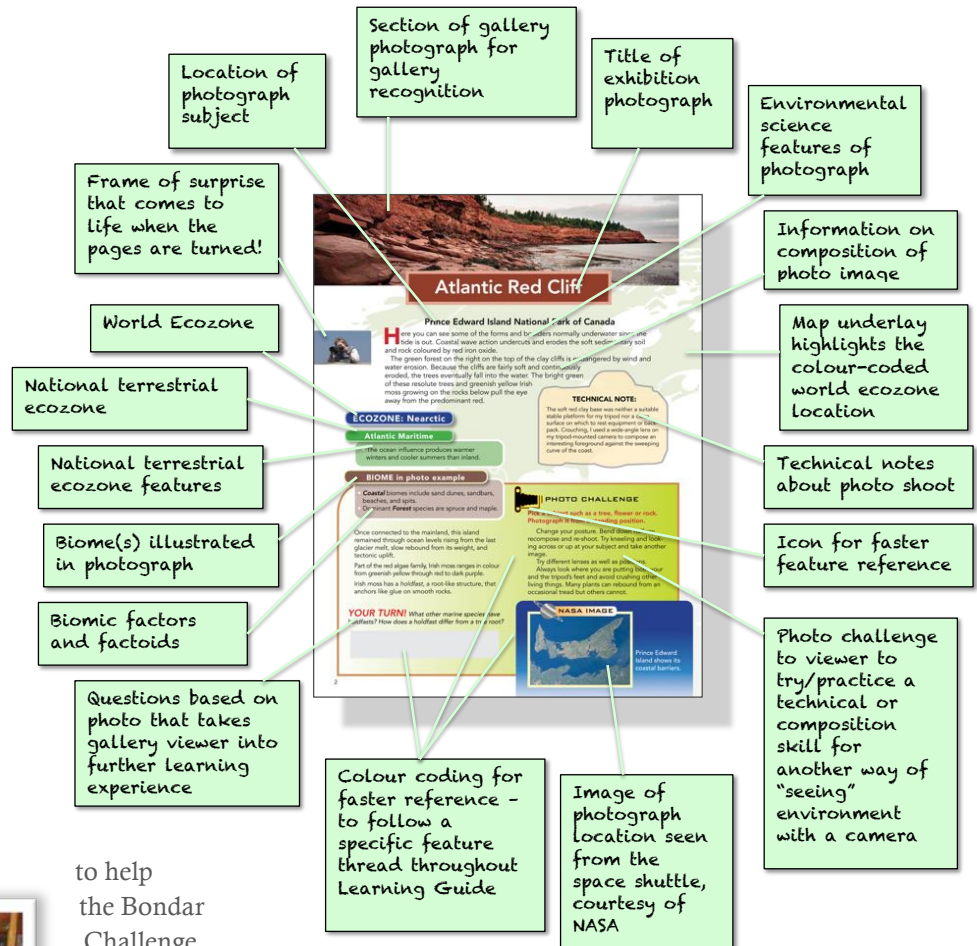


Continued

Over 250 guests attended the event, with personal video messages by His Excellency the Right Honourable David Johnston, Governor General of Canada and the Right Honourable Stephen Harper, Prime Minister of Canada.

The Learning Guide

In support of the Travelling Exhibition and Learning Experience, Barbara Bondar of Real World Content Advantage, developed a learning guide (LG) that includes maps of where each image was taken, world ecozones, a page about each image in the exhibition, with information about the art and science in the photograph as well as camera tips and challenges (see example facing page). The LG is also used



to help the Bondar Challenge participants in engaging the natural environment, reframing their world and encouraging critical thinking. Images and content of biomes in the

Exhibition are updated through field trips. Last year, video and panoramas taken in the wetlands of the Bosque del Apache, New Mexico, wintering area of cranes, geese and eagles as well as birds in the African savannah and in the wetlands of Wood Buffalo National Park of Canada were added.



Hoopers Africa Trust

Partnerships

Parks Canada



The Foundation also has formed partnerships nationally with Parks Canada, and internationally with Hoopers Africa Trust (HAT), a UK based non-profit organization that promotes education. Parks Canada embraces the Bondar

Challenge to encourage interaction with the natural environment of our national parks, and to reduce the “nature

deficit” experienced by many young people. In collaboration with HAT, The RBF runs seminars and workshops on art and science for students of the Masai Mara, Kenya. The RBF leverages the opportunities provided by both Parks Canada and HAT to research and add materials, including images, to the Biomes of the Travelling Exhibition and Learning Experience.





Yawning Male Leopard

Masai Mara National Reserve, Kenya

Leopards are solitary animals and occur through Africa. It is a cunning predator and has adapted to changing its diet from typically small game such as antelope to domestic animals when there is no natural wild prey available. Frequently caching its kill in trees, the leopard will return at night to feed. Many of their attempted kills are not successful, especially in daylight. Their technique is to pounce on an unsuspecting animal to kill it, but if the leopard misses, he or she rarely gives chase. This triptych gives a glimpse into a leopard's mouth from a safe distance.

TECHNICAL NOTE:

Almost camouflaged in their environment, leopards are difficult to see when they are hidden amongst trees and shadows. It is unusual to find a male leopard so boldly in the open, resting. To gain the best angle of view and the sharpest image, I attached my camera to a clamp that had been previously installed on the top railing of the vehicle. My long wait for a photograph of a leopard's behaviour was rewarded for the brief seconds it took to complete his yawn.



ECOZONE: Afrotropic

Masai Mara

- The Great Migration of wildlife millions, in search of fresh pasture, also attracts hungry predators.

How stealthy and cunning is the leopard? When not hunting, it can actually move through herds of antelopes without disturbing them too much! How? The leopard flips its tail over its back to reveal the white underside, a sign that it is not seeking prey.

Other predators, lions and hyenas, will often try to take away a leopard's kill. To prevent this, leopards, renowned for their strength, can haul and store their larger kills in trees where they can feed on them in relative safety.

Leopards are also strong swimmers that can catch fish and crabs.

More than one leopard is called a "leap".

BIOME in photo example

- Tropical Savannah** with smaller biomes of:
- Wooded and Open **Grasslands**, large termite mounds offer elevations for predators.
 - Grassland** is arid during the dry season.

EcoSpots

Leopard Head

Leopard spots are called rosettes and are not the solid colour of cheetah markings.



Cheetah Head

The cheetah's head is smaller in relation to its body, more streamlined. "Teardrop" type markings run from the eye corners to the sides of its mouth. Its muzzle is not as prominent and its enlarged nasal cavity accommodates air intake as it races.



www.therobertabondarfoundation.org

The website is an active resource for educators, students and the general public. New features introduced within the past year include: On This Day, (OTD) (see right hand column); Bondar Challenge



On This Day

At *The Roberta Bondar Foundation*, we believe that it is important every day, to honour and call attention to people of vision and events of international importance that have reframed our relationship with our world. Some of these are instantly recognizable. Others may surprise.

You will find themes about visionaries, nature conservation, flight, image making, and the *aha!* moments in the sciences and arts. You'll meet the shakers and movers, known and less known, the large and small moments of how we learn about our world and our world's world.

We share these insights into some of what has made us what we are today. Perhaps they will inspire you to see new points-of-view and use as springboards into a new or related interest in the science we are and the art that we live.



Barbara C. Bondar, OTD blogger, developer of the Learning Guide and EcoSeek Idea Generator Deck, is a specialist in interdisciplinary learning and psycholinguistics. She has worked in public, private, university, and corporate education and has received awards for both her fiction and non-fiction writing.

The website can also be accessed through www.therbf.org



EcoSeek cards ~
Idea Generator Deck,
Camera Tips, Judges



Engaging the environment out of doors provides the opportunity to apply knowledge in a field experience. To sensitize participants in the Bondar Challenge to the natural world, the EcoSeek Idea Generator Deck poses small and easily achieved challenges. This helps reframe the world into one of curiosity and respect for natural ecosystems.



winning entries; rules and judging details, trainers' tool kit for new Bondar Challenges; information on the Travelling Exhibition; updates to the Photo Galleries and Media. This year, we are adding fieldwork video, interviews with Bondar Challenge participants and links to resources that the Foundation recommends, such as Parks Canada and other government sites that provide accurate, trusted and useful information.



Jeff Shatford, Mike Keizer (Parks Canada) and Dr. Bondar assessing wilderness opportunity for the Bondar Challenge at Sweetgrass Station in Wood Buffalo National Park of Canada

What others are saying about us

- "The exhibition was very well received. We had people after closing coming and asking if they could see it." *Jasmina Jovanovic, Director, Art Gallery of Algoma, Sault Ste. Marie, ON*
 - "It has been such a pleasure to work with the team at The Roberta Bondar Foundation. This exhibition and the Bondar Challenge has been a highlight in my gallery career. I know that the work presented through the Foundation has made an extraordinary impact on our community. To have experienced Roberta's work and the printed Learning Guide, that will continue to be used in classrooms has left many inspired! - *Laurie Kerrin Carlyle, Education Director, Art Gallery of Algoma, Sault Ste. Marie, ON*
- "Everyone involved learned so much through the Bondar Challenge and we are already thinking of ways to improve for next year." - *Joan Hamilton, Principal, Roberta Bondar P.S, Brampton, ON*
- "We have a renewed confidence in our youth and the work of The Foundation and I'm very excited to be part of this launch." – *Brenda Stenta, Manager Corporate Communications, Essar Steel, Sault Ste. Marie, ON*
- "Overall, I think the program will go over very well and am excited to continue to implement it for the summer. Can hardly wait until the next group of campers arrives." – *Charlotte Roy, Doe Lake Girl Guide Camp, Sprucedale, ON*
- "I came away with a renewed sense of energy and know that I can see my environment through a different lens." – *Algoma District School Board, ON, participant age 17*

Thank you to our Founding Donors ~ without you, these best beginnings would not have been possible; and to our many supporters, donors, volunteers and friends ~ all of you made the Foundation's vision a reality and helped reframe the world for many. We will continue to move forward with your ongoing support.



Foundation Directors ~ Douglas Tipple, Bonnie Patterson, Betty Roots, Roberta Bondar and Elaine Paterson attended the fundraiser hosted by the City of Sault Ste. Marie for The Roberta Bondar Foundation.



Judges for the Bondar Challenge ~ Arthur Bondar, Susan Chow, Roberta Bondar, Michael Burtch, Betty Roots



Engaging the Environment Through Photography

Learner-friendly tools help build a better understanding of environmental science and thus the health of our planet

The population at large has an important role to play in influencing change that will contribute to the preservation of our natural environment. A large portion of humanity is estranged from nature. We need to cultivate a sense of awe, respect and appreciation for the other life forms that share our crowded and imperiled planet, forging an emotional bond between nature and us. Acquired knowledge of a subject has a heavy influence on subsequent attitudes and behaviours.

Photography anchors the learning experiences that The Roberta Bondar Foundation provides. It can be a gateway to understanding, inquisitiveness and life-long learning. Photography speaks the universal language of images, which is understood by people of every culture. It is a powerful medium for transmitting ideas, bringing the reality of unfamiliar perception closer to our emotional core. Through the fusion of art and science, learning becomes a creative and stimulating means to broadening our understanding of the environment, and our inter-relationship with the elements of nature and other life that exists on planet Earth. We also become better attuned to the intricate ecosystems that adapt to changing environments.

Make a Difference with Your Gift

Your support of The Roberta Bondar Foundation is an investment in the future well being of all forms of life on planet Earth. Your contribution will go directly toward the development of learner-friendly approaches to understanding the environment.

To donate: www.therbf.org

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