



Agnes Etherington ART CENTRE

**Teaching About Photography and the Environment**

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## INTRODUCTION

*Teaching About Photography and the Environment* is designed to complement the exhibition *Edward Burtynsky: Material World* (on view at the Agnes Etherington Art Centre, 28 June-19 October, 2008). In the Ontario curriculum for grades 9 -12, the following subjects relate to the exhibition: Visual Arts (VA); Media Arts (MA); Canadian and World Studies (C&WS), which includes Geography and History; and Science (S). Integrated Technology (IT), Manufacturing Technology (MT), Technological Design (TD) and Transportation Technology (TT) in Grades 11 and 12 also link because they cover the environmental impacts of using specific materials in production and transportation.

The themes of the exhibition include:

1. Impact of photography
2. Dependence on oil and its products
3. Our ecological footprints
4. How industrialization impacts the environment
5. Urban development
6. Sustainability

Outlined below are the primary strands and/or expectations which correspond to the themes taken directly from the Ontario Ministry of Education and Training curriculum documents.

For more information on the Ministry's guidelines to assist teachers in bringing environmental education into the classroom in each discipline please see: **Environmental Education: Scope and Sequence of Expectations, The Ontario Curriculum, Grades 9-12, Resources Guide, 2008** at [www.edu.gov.on.ca](http://www.edu.gov.on.ca)

## CURRICULUM CONNECTIONS

**VISUAL ARTS (VA)** Students will:

- Analyze elements and principles of design; aesthetic and compositional components; influence of art on our lives.
- Adapt techniques and styles used in artworks.
- Explain the effect of social, political, economic and personal beliefs and experiences on their artwork and demonstrate an understanding of modern and contemporary art, especially Canadian.

**MEDIA ARTS (MA)** Students will:

- Identify and describe the use of elements and principles in works.
- Identify and explain of how works of art affect the perceptions of identity.
- Analyze the symbolic function of elements in works.

- Explain the development of media arts in terms of its origin.

## **CANADIAN AND WORLD STUDIES (C&WS)**

### **Geography**

*Human-environment Interactions:* Students will:

- Demonstrate an understanding of how human-induced changes in natural systems can diminish their capacity for supporting human activity (exhibition link: in some parts of China water is undrinkable).
- Evaluate the impacts of urbanization on selected environments (exhibition link: China's major cities); demonstrate an understanding of how humans are an integral part of an ecological system and of how human activity has short and long-term effects on the natural environment.

*Global Connections:* Students will:

- Identify current global sustainability issues and environmental threats.
- Evaluate the effects of the information revolution, technological progress and global trade on world regions (exhibition link: urban living, cars/highways, human consumption).
- Report on global issues that affect Canadians.
- Compare, in terms of resource use and consumption, the ecological footprint of an average Canadian with that of an average citizen in a developing country.

*Understanding and Managing Change:* Students will:

- Evaluate the sustainability of selected trends related to consumption of the earth's resources.

### **History**

*Social, Economic and Political Structures:* Students will:

- Describe and assess global implications of major economic crises since 1900 (China's Great Leap Forward, the 1973 OPEC oil crisis etc.).

*Communities: Local, National and Global:* Students will:

- Describe the development of urbanization and its impact on various communities and the environment.

## **SCIENCE (S)**

### **Biology**

*The Sustainability of Ecosystems:* Students will:

- Demonstrate an understanding of the dynamic nature of ecosystems, including the relationship between ecological balance and the sustainability of life.
- Analyze issues related to environmental sustainability (natural and human threats) and impact of technology on ecosystems and propose viable solutions.

*Ecosystems and Human Activity:* Students will:

- Demonstrate an understanding of the impact of humans on the environment, and assess alternative courses of action to protect the environment.

*Energy Alternatives and Global Impact:* Students will:

- Assess conventional and alternative energy sources in terms of their ability to satisfy societal demand and of their environmental impact.

*Waste Management:* Students will:

- Describe and analyze the interaction of science, society, and government in the development of various waste management strategies, and assess the impact of various wastes on the environment.

*Technologies in Everyday Life:* Students will:

- Identify and analyze issues involving societal impact and change related to modern everyday technologies.

### ***Earth and Space Science***

*Earth Material:* Students will:

- Demonstrate an understanding of society's dependence on earth materials, of the effects of developments in technology on the exploration and mining of earth's materials, and of the ways in which the use and extraction of earth's materials have affected natural and human-made environments.

**INTEGRATED TECHNOLOGY (IT)** Students will:

- Describe environmental, ecological and social considerations related to the use of technologies, processes and natural resources.

### **MANUFACTURING TECHNOLOGY (MT)**

*Manufacturing Engineering Technology:* Students will:

- Demonstrate an ability to make informed decisions concerning the social, economic, and environmental consequences and impact of the manufacturing sector.

**TECHNOLOGICAL DESIGN (IT)** Students will:

- Identify actions that can be taken in response to environmental concerns, including environmentally-friendly alternative approaches and materials.

**TRANSPORTATION TECHNOLOGY (TT)** Students will:

- Evaluate the environmental impacts of using specific products and processes, and recommend alternative methods and materials to reduce any negative impacts.

## DISCUSSION/ASSIGNMENT TOPICS

The following curriculum-based activities and discussion topics have been created to support educators in enhancing the student's learning experiences in the classroom. The topics have been divided under the general categories of photography and the environment. The appropriate curriculum subjects have been included in brackets for easy reference.

### A. PHOTOGRAPHY

Consult the *Images* section at [www.aeac.ca/programs and events/teachers' resources/secondary programs/Edward Burtynsky](http://www.aeac.ca/programs_and_events/teachers_resources/secondary_programs/Edward_Burtynsky) to view ten works by Edward Burtynsky, with information.

#### A. 1. Identify the key elements and principles of design that Burtynsky primarily uses for his images and create a two-dimensional work of art using these elements (VA, MA)

Discussion points:

- Analyze how Burtynsky composes his photographs, with special attention to use of perspective and scale.
- How do the elements and principles of design support Burtynsky's expression of his themes?
- Find another Canadian photographer and compare his/her use of the elements of design to Burtynsky's images.
- How were Burtynsky's photographs created and why?

*Example:* To focus the student's work of art more easily you could recommend that at least two elements or principles similar to Burtynsky's images should be incorporated into their works of art. Encourage students to focus on one key element and make it the driving force for their images. For critical analysis, have the students explain why they chose these elements or principles and how using them has impacted their own work.

#### A. 2. Environmental Juxtaposition – Class Exhibition (VA, MA)

Students will juxtapose two photographs of two contrasting objects from the built or natural environment in order to stimulate the viewer to question environmental practices. The two images will connect or interact on two levels:

*Conceptual* – e.g.: old versus new; polished versus corroded (see list below). Students will account for what they meant in their comparisons.

*Visual* – the images will connect visually through intersecting shapes, colour, line, symmetry, repetition, etc.

Students will create 20 x 25 cm prints, mount them on white mat board and display them in pairs. For expressive impact, mount the pairs of prints in a large grid.

### *Paired Concepts*

Decay/growth	Living/Dead
Old/New	Useful/Useless
Polished/Corroded	Strong/Weak
Reflective/Non-reflective	Empty/Full
Transparent/Occluded	Expressive/Crushed
Excavated/Deposited	Vandalized/Maintained
Sliced/Whole	Operational/Out of order
Consolidated/Eroded	

### **Variations**

#### **Crystallized Thoughts (S)**

Each student selects a substance with a crystalline structure, for example sodium chloride or copper sulphate, and constructs all or a portion of that crystal shape out of mat board. Their photographs, produced along similar lines to the previous assignment, are trimmed and glued to the planes of the crystal.

#### **Extend-an-Idea**

Students who are advanced in using Photoshop can combine their pairs of opposites from above into one image, creating a Surrealistic vision. Show students an example of hybridizing two objects into one: a useful example is Rene Magritte's *L'Exception*. A hybrid of a fish and cigar in the context of this assignment could function as a metaphor denouncing human encroachment on wildlife habitats.

#### **A. 3. Explore the art of the past to examine how photographers and artists captured the industrial landscape (VA, MA, C&WS)**

Discussion points:

- Is there a link between Burtynsky's images and earlier photographers? (e.g. Carleton Watkins, Margaret Bourke-White, Edward Weston, Charles Sheeler, Charles Burchfield, August Sander, Fredrick Sommer, William Gropper, and Lewis Hine)
- Is there a link with earlier Canadian artists' depictions of industrial landscapes? (e.g. A. Y. Jackson, Franklin Carmichael, Carl Shaefer, Charles Comfort, Jack Bush, Adrien Hébert and William Kurelek)
- Is a documentary photograph a work of art? If not, when does a documentary photography become a work of art?

#### **A. 4. Compare and contrast Edward Burtynsky's work with other artists who focus on the human impact upon the environment. (VA, MA)**

*Example:* The students could choose one other photographer and compare their work to Burtynsky's.

Discussion points:

- Compositional and design elements, location of photographs and the social impact of the works on the viewer
- Are the artists environmental activists or are they documentary photographers? And why or why not?
- How did they get involved in their current work?
- What are the similarities among environmental artists?

Following is a selected list of artists to help start the dialogue:

***Imaging a Shattering Earth: Contemporary Photography and the Environmental Debate.***

[www2.oakland.edu/shatteringearth](http://www2.oakland.edu/shatteringearth)

Intended to reaffirm the urgency of a global response, this exhibition features fifty-six provocative testimonies by photographers Edward Burtynsky, Jonathan Long, John Ganis, Peter Goin, Emmet Gowin, David T. Hanson, David Maisel, David McMillan, Robert and Shana ParkeHarrison, John Pfahl, and Mark Ruwedel.

Included below is an overview of each artist in the above exhibition (see the Biography and Images section of our website for information on Burtynsky) and their corresponding websites, if available:

**John Ganis**

[www.johnganisphotography.com](http://www.johnganisphotography.com)

His photographic work focuses on places where land development and resource extraction have had an impact on the American landscape which he views as indices of contemporary cultural value.

**Peter Goin**

[www.petergoin.com](http://www.petergoin.com)

Goin's work features nuclear sites, mining sites, irrigated and dwindling rivers, parched terrains, and polluted areas.

**Emmet Gowin**

Gowin's aerial photographs capture strip mining sites, nuclear testing fields, large-scale agricultural fields and other scars in the natural landscape.

**David T. Hanson**

[www.davidthanson.net](http://www.davidthanson.net)

His works portray the destructive impact of man upon nature in breathtaking aerial photographs showing some of the most polluted regions in the United States.

**Jonathan Long**

[www.jonlong.com](http://www.jonlong.com)

Some of his recent work addresses environmental issues including land development, water allocation, ecosystem fragmentation and loss open space which he hopes will develop a respect in his viewers for the environment.

**David Maisel**

[www.davidmaisel.com](http://www.davidmaisel.com)

Maisel's photography often consists of bird's-eye views of the earth, which depict beautiful, albeit unsettling scenery, wherein he reveals how man wounds the earth.

**David McMillan**

[home.cc.umanitoba.ca/~dmcmill/index.html](http://home.cc.umanitoba.ca/~dmcmill/index.html)

McMillan's photographs primarily deal with the relationship between culture and nature, the bulk of his current work documenting the changing landscape affected by the accident at the Chernobyl Nuclear Power Plant over a period of fifteen years.

**Robert and Shana ParkeHarrison**

[www.parkeharrison.com](http://www.parkeharrison.com)

The couple portrays our environmentally shattered world in starkly poetic monochromatic photographs. The nature of their images and the process of their construction are interdisciplinary, embodying aspects of theatre, sculpture, painting and photography.

**John Pfahl**

[www.johnpfahl.com](http://www.johnpfahl.com)

Pfahl creates images of nature that get inside one's mind and provokes thinking, allowing us to see something that may have been forgotten, or never even seen at all.

**Mark Ruwedel**

Ruwedel explores the impact of human technologies and cultures on the land, focusing upon landscapes where remains of history are still apparent.

**Other Artists****John Dahlsen**

[www.johndahlsen.com/enviro\\_art.html](http://www.johndahlsen.com/enviro_art.html)

Dahlsen uses found objects to express contemporary social and environmental concerns which stem from his belief that presently our planet exists in a fragile ecological state.

**Robert Dawson**

[www.robertdawson.com/index.html](http://www.robertdawson.com/index.html)

Dawson has long been interested in how photography can be used to understand our relationship with the environment and the ability to shape public awareness and understanding of the place we call home.

**Andy Goldsworthy**

[www.andygoldsworthy.tripod.com](http://www.andygoldsworthy.tripod.com)

Goldsworthy is a world-renowned British sculptor, photographer and environmentalist living in Scotland who produces site-specific sculpture and land art situated in natural and urban settings. His art involves the use of natural and found objects, to create both temporary and permanent sculptures which draw out the character of their environments.

A popular source of information on Goldsworthy is the film *Rivers and Tides: Andy Goldsworthy Working With Time* (a Mediopolis Film and Fernsehproduktion with Skyline Productions Ltd. Docurama DVD video, New Video Group, 2004).

### **Naoya Hatakeyama**

[www.lagallery-frankfurt.de/hatakeyama](http://www.lagallery-frankfurt.de/hatakeyama).

This Japanese photographer has a long-time interest in depicting images of mines, quarries, and architecture, all on a large scale. His *Blast* series critiques man's wanton destruction of nature and its capacity to do so in nanoseconds, undoing what has taken millions, even billions, of years to form.

### **Jenny Kendler**

[www.jennykender.com](http://www.jennykender.com)

Kendler's work revolves around the theme of human beings' relationship with nature and the natural world through the lens of modern ecology, feminism and environmentalism. Many of her pieces deal with the fallout of the widening schism between nature and culture, focusing on our estranged relationship with other species, and the habitats we must share.

### **Art Wolfe**

[www.artwolfe.com](http://www.artwolfe.com)

His stunning images interpret and record the world's fast-disappearing wildlife, landscapes and native cultures, and are a lasting inspiration to those who seek to preserve them.

## **Canadian Photographers**

### **Isabelle Hayeur**

[www.isabelle-hayeur.com](http://www.isabelle-hayeur.com)

Hayeur's work tries to gain a deeper understanding of landscape states in order to comprehend our societies' relationships to their environments. Her landscape representations are attitudes of awareness; our interpretations of them and their spatial compositions bring us new visions of the world and ourselves.

### **Thaddeus Holownia**

[www.holownia.com](http://www.holownia.com)

Holownia portrays the human intrusion into the natural environment, the power of time to bring about change, and the possibilities of human subjects to be reflected in objects.

### **Geoffrey James**

James pays particular attention to ways in which nature and culture intersect. His current images offer a less optimistic outlook on the ruined, intrusive landscapes of asbestos mining in Québec and the US/Mexico border fence in southern California.

### **Jeff Wall**

[www.answers.com/topic/jeff-wall](http://www.answers.com/topic/jeff-wall)

Wall is best known for his large-scale back-lit cibachrome photographs characterized as one-frame cinematic productions.

## **B. ENVIRONMENT**

### **B. 1. Trace your ecological footprint for a day: What you use, eat, wear and watch** (All subjects)

*Example:* Use writing, diagrams, photographs, a work of art, or film and video to show different times of the day, highlighting various consumer products and technology with which you come into contact.

*Activity:* As a class, brainstorm how, what, why and when the students use natural resources and discuss the hidden costs of non-renewable resource use (worker conditions, transportation, pollution, waste, loss of natural habitats), as well as renewable natural resources (solar & wind). Each student could calculate his/her own natural resource impact and also compare, in terms of resource use and consumption, the ecological footprint of an average Canadian with that of an average citizen in a developing country. They could create a series of photographs that suggest the environmental footprint of one part of a day, e.g. What was the environmental impact of cooking dinner?

*Activity:* Students could research the life cycle of one item they use daily (food, clothing, paper, game, etc). If possible, read articles and/or watch videos describing modern industry.

Discussion points:

- Where was the object made?
- How was it made? What resources were used?
- Worker's wages and corporation profits
- Is the cost of the object equal to the quality of the object? If it costs more to be made in Canada would you still purchase it? Why or why not?

*Activity:* Students could create a personal daily journal of all goods eaten or used for two weeks. Based on their findings, analyze eating habits (nutrition), waste creation (weigh all trash, recyclables and non-recyclables), import, export and trade issues, hidden costs of products (inexpensive in dollar amount you pay at the store, but expensive as far as agricultural practices, shipping, handling, pollution, etc.). Students could also discuss free trade and globalization. Other projects could include: creating self 'audit charts' graphing all findings, writing a book or comic on everyday ideas of how to curb waste and consumption, or a guide to better, more sustainable nutrition (eating and purchasing locally).

**B. 2. Make a list, a diagram or create a work of art illustrating the positive/negative impacts on people and the environment due to manufacturing, transportation, and consumption.** This could be used in connection with the ecological footprint discussion topic (1). (All subjects)

Discussion points:

- What are the short and long term effects of consumption versus natural resources?
- What are some of the possible solutions/resolutions for resource management including alternate energy sources that would satisfy societal demand?

*Examples:*

**The Arts and Canadian and World Studies.** Use of words, phrases, poems, Venn Diagram and/or a work of art incorporating, photographs, drawings, painting, and collage could show the impacts in juxtaposition to each other. A multi-media production incorporating film/video and sound could also be used to illustrate the impacts, perhaps recording the sounds of traffic, machinery, video games, eating, etc. Theatre Arts classes could write monologues or create a play in response to the impacts and perform it using recycled material as costumes and/or props. The performance could be documented with a still photograph of a scene or the students could construct a tableau specially designed for the photograph.

**Technology.** Students in the Technology disciplines (IT, MD, TD and TT) could discuss the positive and negative effects of technology in their daily lives. Suggested discussion topics could include: What does technology represent to the students? How are they affected by technology?

*Activity:* Have students list the ten most important things or values in their lives. Create a class list from the results. If technological items are on the list (games, computers, etc.), discuss how important they are and how would life be without them. Better? Worse? And why? Have students form groups and research the technological advancement of other countries. Have students discuss and write about quality of life. What is quality of life? Does it differ depending on technological advances?

**Explore the life cycle of a consumer product.** Suggested products are a pencil, iPod, computer, car and water (All subjects)

*Example:* Could be illustrated by a circular diagram including what happens when and if the product is recycled. Works of art, including film, photographs, paintings could be produced to showcase the product's life cycle.

*Activity:* Find a natural, local water source in the community, such as a local waste water treatment plant for local drinking water. In small groups, have students create a map of the life cycle of the local water. Begin the map at the water's origin, follow the transportation path to the treatment site, follow the community plumbing system, then follow the water cycle from their home drains to the treatment centre and beyond. Have groups follow different drinking water paths: home use, public use, school, etc. This also has some photographic possibilities: students could photograph the pathways of pipes, those anonymous pumping stations, outflow pipes, treatment plants, etc.

**B. 3. Investigate what factors influence sustainability and why it is important to be aware of the impact of human activities on ecological balance (C&WS, S)**

*Example:* Students could research and discuss the effects of rising global population on natural resources.

Discussion points:

- Global warming - automobile emissions, the Kyoto Treaty, the Canadian and world response to global warming
- The earth's carrying capacity (how many people can the earth sustainably support), food supply, genetically engineered seeds, and changing farming practices
- Habitat loss - impacts on rivers, oceans, mountains, animals, fish and insects from increasing human population and urban/suburban growth

*Activity:* The students could debate the pros and cons of the effect of using automobiles, for example.

**B. 4. Investigate other megaprojects (see definition below) similar to the Three Gorges Dam in China that impacted or will impact people's lives.** (C&WS, S, TD).

Possible sites/resources to help research Canadian megaprojects are:

The St. Lawrence Seaway project of western Québec and eastern Ontario, which entailed the disappearance of six villages and three hamlets which lay in the water's path, was one of the great engineering projects of the twentieth century. Information on it can be found at these websites:

[www.lostvillages.ca/en](http://www.lostvillages.ca/en)

[www.canada.com/ottawacitizen/features/lostvillages](http://www.canada.com/ottawacitizen/features/lostvillages)

and in these DVDs:

*Treasures of the Lost Villages* (2008)

*Submerged* (2007)

Hydroelectrical Developments in the James Bay Region

[jstor.org/sici?sici=00167428\(198301\)73%3A1%3C110%3AHDITJB%3E2.0.CO%3B2-E](http://jstor.org/sici?sici=00167428(198301)73%3A1%3C110%3AHDITJB%3E2.0.CO%3B2-E)

The James Bay Hydroelectric Project - Issue of the Century

[pubs.aina.ucalgary.ca/arctic/Arctic44-3-iii.pdf](http://pubs.aina.ucalgary.ca/arctic/Arctic44-3-iii.pdf)

James Bay Project and the Cree

[www.archives.cbc.ca/society/native\\_issues/topics/94-455](http://www.archives.cbc.ca/society/native_issues/topics/94-455)

Lower Churchill Megaproject

[www.cbc.ca/canada/newfoundland-labrador/story/2006/12/01/lower-churchill.html](http://www.cbc.ca/canada/newfoundland-labrador/story/2006/12/01/lower-churchill.html)

Major Energy Projects in Bruce County

[www.windaction.org/news/13683](http://www.windaction.org/news/13683)

Atlantic Canada's Big, Fat Energy Inventory

[www.progressmedia.ca/article/2008/06/atlantic-canadas-big-fat-energy-inventory](http://www.progressmedia.ca/article/2008/06/atlantic-canadas-big-fat-energy-inventory)

1970-1979: A Decade of Megaprojects

[www.bechtel.com/BAC-Chapter-5.html](http://www.bechtel.com/BAC-Chapter-5.html)

A Student's Essay - Mega Projects Leave Mega Impacts on Society

[www.bookrags.com/essay-2005/12/12/191920/65](http://www.bookrags.com/essay-2005/12/12/191920/65)

Aspects of Sustainability Following Closure of the Steep Rock Iron Mines,  
Ontario

[www.emg.geoscienceworld.org/cgi/content/abstract/12/1-4/37](http://www.emg.geoscienceworld.org/cgi/content/abstract/12/1-4/37)

[www.mii.org/steeprock/steeprock.html](http://www.mii.org/steeprock/steeprock.html)

*Example:* Research China's Three Gorges Dam on one of the following sites:

Scientific American

[www.sciam.com](http://www.sciam.com)

or

Public Broadcasting system - The Great Wall across the Yangtze

[www.pbs.org/itvs/greatwall/](http://www.pbs.org/itvs/greatwall/)

After reviewing the Three Gorges Dam megaproject with students, assign them to research another megaproject.

Discussion points:

- Where is the megaproject?
- What are the similarities to the Three Gorges Dam?
- What was or is the impact upon the people due to the megaproject?  
How would I feel if I was one of the people who were affected by the megaproject? What would I do?

**Definition:** A *megaproject* is an extremely large-scale investment project.

Megaprojects are typically defined as costing more than US\$1 billion and attracting a lot of public attention because of substantial impacts on communities, environment, and budgets.

## RESOURCES

### EDWARD BURTYNSKY

#### Websites

Edward Burtynsky  
[www.edwardburtynsky.com](http://www.edwardburtynsky.com)

TED (Technology, Entertainment, Design)  
[www.ted.com](http://www.ted.com)

Edward Burtynsky was the 2005 winner of the TED prize. In addition to a cash prize the winner is granted a wish to change the world. View Burtynsky's wishes and the progress updates.

#### Selected Books

Burtynsky, Edward. *Quarries*. London, United Kingdom: Steidl, 2006.

Burtynsky, Edward. *China: The Photographs of Edward Burtynsky*. With essays by Mark Mayer, Ted C. Fishman and Mark Kingwell. Göttingen: Steidl, 2005.

Burtynsky, Edward and Gary Michael Dault. *Before the Flood*. Edward Burtynsky and C.J. Graphics. Toronto, Canada, 2003.

Burtynsky, Edward. *Edward Burtynsky: Ten Years*. The Gallery. New York, New York, 2001.

Pauli, Lori, Mark Haworth-Booth, Kenneth Baker and Michael Torosian. *Manufactured Landscapes: The Photographs of Edward Burtynsky*. National Gallery of Canada in association with Yale University Press. New Haven, Connecticut, 2003.

For more books, articles, catalogues, reviews and interviews please refer to the artist's website.

#### Film

*Manufactured Landscapes* (2006, 90 minutes)  
[www.mongrelmedia.com](http://www.mongrelmedia.com)

This film by Jennifer Baichwal is a feature-length documentary on the world and work of renowned artist Edward Burtynsky. The film follows Burtynsky to China as he travels the country photographing the evidence and effects of that country's massive industrial revolution. Shot in Super-16mm film, *Manufactured Landscapes* extends the narrative streams of Burtynsky's photographs, allowing us to meditate on our profound impact on the planet and witness both the epicentres of industrial endeavour and the dumping grounds of its waste.

## PHOTOGRAPHY

### Websites

#### **CyberMuse**

[www.cybermuse.gallery.ca](http://www.cybermuse.gallery.ca)

This is the art education research site of the National Gallery of Canada and the Canadian Museum of Contemporary Photography, with extensive holdings in photography.

#### **George Eastman House**

[www.eastmanhouse.org](http://www.eastmanhouse.org)

Located in Rochester, New York, this museum tells the story of photography and motion pictures.

#### **McCord Museum of Canadian History**

[www.mccord-museum.qc.ca](http://www.mccord-museum.qc.ca)

The EduWeb section of their website has extensive educational resources, including access to images from the Notman Photographic Archive, which provides a visual history of Canada from the 1840s to the present.

#### **National Film Board of Canada**

[www.nfb.ca](http://www.nfb.ca)

Search their database for films on photography or the environment.

#### **National Geographic**

[www.nationalgeographic.com](http://www.nationalgeographic.com)

The photography section of their website has extensive information including how their photographers get their shots.

### Films

#### ***The Adventure of Photography*** (1998, 260 minutes)

It touches upon the majority of the topics and issues of photography such as the Precursors, Surrealists, War photography, Portraitists, Photoreporters, Fashion photography and Photography and Science.

#### ***Ansel Adams - A Documentary Film*** (2002, 100 minutes)

An elegant, moving and lyrical portrait of one of the most eloquent and quintessentially American photographers. At the heart of the film are the themes that absorbed Adams throughout his career: the beauty and fragility of "the American earth," the inseparable bond between man and nature and the moral obligations that the present owes to the future.

#### ***Chased By The Light - A Video Journey With Jim Brandenburg***

(2003, 87 minutes)

This documentary tells the story of how one of the world's greatest nature photographers immersed himself in a Zen-like exploration of his craft and the untamed landscape of the rugged north woods of Minnesota. For 90 days Brandenburg took only a single picture each day - one click of the shutter. The stunning images resulted in a *National Geographic* cover story as well as the best selling book by the same name.

**Contacts Vol. 1 - *The Great Tradition of Photojournalism***

(2005, 156 minutes)

**Contacts Vol. 2 - *The Renewal of Contemporary Photography***

(2005, 143 minutes)

**Contacts Vol. 3 - *Conceptual Photography***

(2005, 130 minutes)

The world's greatest photographers reveal the secrets behind their images.

***Masters of Photography - Edward Steichen*** (2006, 30 minutes)

Widely regarded as the most influential photographer of the 20th century, Steichen worked in every aspect of the art - fashion, industrial, nature, combat, portrait, table-top. His photomurals of dams, bridges and huge buildings astonished audiences when they were first shown. In the 1920s and 1930s he was the best known and most expensive commercial advertising photographer in New York. A pioneer in aerial photography, during World War II he was in charge of naval combat camera crews.

***Photography: Eleven Artists from Canada*** (1999, 48 minutes)

This National Film Board film enables viewers to admire many of Canadian photographers' works and reveals the wide array of practices and techniques found in the country. The photographers introduce the worlds that they at once witness and create. Each photographer establishes a relationship between his or her universe and the resulting perception of it. The film focuses on a parallel between experience and expression and proposes a form of beauty, which, as one of the participants says, does not always lie in the realm of perfection. The featured artists are: Raymonde April, John Max, Angela Grauerholz, Thaddeus Holownia, Jin-me Yoon, Donigan Cumming, Sandra Semchuk, Michel Campeau, Susan McEachern, Lynne Cohen and Evergon.

***Sebastiao Salgado: Looking Back at You*** (2000, 59 minutes)

One of the world's leading photojournalists, Sebastiao Salgado has shaped our perception of political and social reality. This important look at his work focuses on his monumental photo-essay *Workers*, seven years in the making. Salgado's dominant theme is the displacement of manual labour by technological advances. The film presents an unsentimental documentation of the effects of this new industrial revolution, and focuses on labourers in Eastern Europe, Cuba, Brazil, India, Sicily, and Bangladesh.

***Through the Lens*** (2003, 47 minutes)

*Through the Lens* takes some of the most riveting adventure photographs of the last decade and tells the story behind the images. From BASE jumping the highest waterfall on earth to trekking across Arabia by camel; from frigid Himalayan climbs to fiery volcanic descents, ten featured *National Geographic* photographers take viewers around the globe and plunge them into a thrill-seeking heart-stopping world of action and edge-of-your-seat exploits.

**War Photographer** (2001, 96 minutes)

Nominated for an Academy Award for Best Documentary, this film is the compelling portrait of the man considered the bravest and most important war photographer of our time, James Nachtwey.

**ENVIRONMENTAL EDUCATION****Websites****Adventure Ecology**

[www.adventureecology.com](http://www.adventureecology.com)

**Canadian Network for Environmental Education and Communication (EECOM)**

[www.eecom.org](http://www.eecom.org)

Canada's only national bilingual network for environmental education and communication.

**Cape Farewell**

[www.capefarewell.com](http://www.capefarewell.com)

Through bringing together artists, scientists and communicators, Cape Farewell pioneers the cultural response to climate change.

**Common Threads**

[www.commonthreads.ca](http://www.commonthreads.ca)

Common Threads is the name of the International Solidarity Program of the Ontario Secondary School Teachers' Federation. They have just produced a classroom resource called *Tapped Out: The World Water Crisis*, which can be downloaded from this site.

**Conservation solutions**

[www.greenontario.org](http://www.greenontario.org)

Project of the Conservation Council of Ontario.

**David Suzuki Foundation**

[www.davidsuzuki.org](http://www.davidsuzuki.org)

**Environmental Action and Education Network**

[www.globalresponse.org](http://www.globalresponse.org)

**Environment Canada**

[www.ec.gc.ca](http://www.ec.gc.ca)

**Environmental Education on the Internet**

[eelink.net/pages/EE-Link+Introduction](http://eelink.net/pages/EE-Link+Introduction)

**Greenlearning**

[www.greenlearning.ca](http://www.greenlearning.ca)

Educational website of the Pembina Foundation for Environmental Research and Education.

**Ideas That Can Change the World**

[www.ideasthatcan.com](http://www.ideasthatcan.com)

**Institute for Sustainability Education & Action (I-SEA)**

[www.i-sea.org](http://www.i-sea.org)

British Columbia, Canada

**Learning for a Sustainable Future**

[www.lsf-lst.ca](http://www.lsf-lst.ca)

Canadian organization created to integrate education for sustainable development into the curricula at all grade levels in Canada.

**National Geographic**

[www.nationalgeographic.com](http://www.nationalgeographic.com)

**Nature Conservancy**

[www.nature.org](http://www.nature.org)

Leading conservation organization working around the world to protect ecologically-important lands and waters for nature and people.

**Platform for London**

[www.platformlondon.org/education.asp](http://www.platformlondon.org/education.asp)

Promoting creative processes of democratic engagement to advance social and ecological justice

**Sierra Club**

[www.sierraclub.ca](http://www.sierraclub.ca)

Grassroots defenders of Canada's environment since 1963

**Teaching About Energy**

[www.re-energy.ca](http://www.re-energy.ca)

**Teaching and Learning for a Sustainable Future**

[www.unesco.org/education/tlsf/](http://www.unesco.org/education/tlsf/)

Site developed by UNESCO (United Nations Educational, Scientific and Cultural Organization).

**Films**

***A Crude Awakening: The Oil Crash*** (2007, 85 minutes)

*A Crude Awakening* serves as an excellent introduction to the subject of Peak Oil and all of the related topics - the huge rise in human population numbers, locations, and living standards made possible by cheap and abundant petroleum products; the economic risk related to high oil prices and fuel shortages; the problems inherent in non-renewables like coal and nuclear and the challenges facing alternatives like ethanol, biodiesel, wind, solar, and hydrogen; the ultimate likely impact of "energy

descent" on our modern way of life; and the politics of petroleum, including war for oil. The film puts the story together in a cogent, comprehensive way, leaving those who already know about Peak Oil with an expanded, reinvigorated understanding of the subject, and provides newbies with a clear picture of a complex topic that promises to change life as we know it.

***An Inconvenient Truth*** (2006, 56 minutes)

Al Gore's film makes the compelling case that global warming is real, man-made, and its effects will be cataclysmic if we don't act now.

***ECO RAP: Voices From the Hood*** (1993, 39 minutes)

This video presents ecological issues from the viewpoint of a multiethnic group of young people as they learn about local environmental hazards and express their views using rap music.

***Flooding Job's Garden*** (1991, 57 minutes)

A National Film Board-produced film that shows how the James Bay and Northern Québec Agreement of 1975 became an environmental and cultural nightmare for the Cree peoples of the region.

***Great Wall Across The Yangtze*** (2000, 60 minutes)

Documenting the construction of the Three Gorges Dam, the largest and most powerful hydro-electric project in the world.

***Heavy Metal*** (2004, 56 minutes)

Heavy Metal explores the haunting controversy behind a century of silver-lead-zinc mining in Idaho's panhandle and reveals the dangerous health impacts left behind.

***Strange Days on Planet Earth*** (2005, 220 minutes)

This award-winning series series by *National Geographic* uses state-of-the-art graphics and globe-spanning investigations to understand how our environment is changing and why.

Episode 1 - Invaders

Episode 2 - The One Degree Factor

Episode 3 - Predators

Episode 4 - Troubled Waters

***The 11th Hour*** (2008, 92 minutes)

With contributions from over 50 of the world's most prominent thinkers and activists, including former Soviet leader Mikhail Gorbachev, physicist Stephen Hawking, Nobel Prize winner Wangari Maathai, and journalist Paul Hawken, the film documents the grave problems facing the planet's life systems. Global warming, deforestation, mass species extinction, and depletion of the oceans' habitats are all addressed.

***The Future of Food*** (2005, 88 minutes)

There is a revolution happening in the farm fields and on the dinner tables of America - a revolution that is transforming the very nature of the food we eat. Offers an in-depth investigation into the disturbing truth behind the unlabeled, patented, genetically engineered foods that have quietly filled U.S. grocery store shelves for the past decade.

***Treasures of the Lost Villages*** (2008)

A diving duo return to the sites previously explored in their first documentary film, *Submerged* (see below). Some of the stories featured in this film are those of former Provincial Paper Ltd. employees who had to leave the village of Mille Roches to follow mill jobs to Thorold in southern Ontario after the flooding of their villages. Another aspect of the film explores the economic boom to the area that the massive projects brought to this quiet corner of Ontario. The stories range from humorous to heartbreaking. The new film also features music by local musicians Liam (Bruce Ciccarelli), The Shiners, and the Trench Town Oddities. The film coincides with the 50th anniversary of the building of the St. Lawrence Seaway.

***Trashed*** (2007)

*Trashed* is a provocative investigation of one of the fastest growing industries in North America: the garbage business. The film examines a fundamental element of modern American culture - the disposal of what our society defines as "waste." It is an issue influenced by every American, most of whom never consider the consequences; nor, it seems, the implications to our biosphere. At times humorous, but deeply poignant, *Trashed* examines the American waste stream fast approaching a half billion tons annually.

***Submerged*** (2007)

Two divers explore the six villages and three hamlets which were submerged during the St. Lawrence Seaway project of 1959.

***What a Way to Go — Life at the End of Empire*** (2007, 123 minutes)

This is a different sort of "Peak Oil movie." Rather than just focusing on the approaching decline in oil production and its likely effects on our petroleum-powered modern lifestyles, it presents that issue merely as a symptom of a larger problem, modern society as empire.