

ROCK YOUR PLANET!

2007-2008 Provincial Youth Program



Biosphère

Environment Museum

Sainte-Hélène Island, Montréal, Quebec



Environment
Canada

Environnement
Canada

Canada

An architectural masterpiece in Montréal since Expo 67, Environment Canada's Biosphère is a premier venue for information, education and awareness on the major environmental issues related to water, air, climate change, sustainable development and responsible consumption.

As an environment museum, the Biosphère offers permanent and temporary exhibitions, events for the general public, and guided activities that are as informative as they are entertaining for youth and adults alike.

1 As Environment Canada's national center of expertise in environmental education and engagement, the Biosphère develops educational products and activities with partners across Canada and provides a forum for exchanges and a one-of-a-kind location for environmental events.

The Biosphère Youth Program is available to school groups from sea to sea. It is made up of educational activities that can be carried out at the museum, in the classroom, in the field or via distance education. There are a number of new activities this year, including a unique educational activity for high schools on air quality and climate change, and a play that encourages teenagers to adopt responsible consumption habits.





Enjoy a stimulating experience with your students

by participating in the Biosphère's Youth Program!

These activities are tied in with the Education Program of the ministère de l'Éducation, du Loisir et du Sport du Québec [Quebec Department of Education, Recreation and Sport] and relate to one or more of the following disciplines: science and technology, social sciences, and the arts. All activities are aimed at encouraging young people to act in harmony with their natural and built environments.

This guide gives you an overview of the activities offered. You can find out more from the detailed fact sheets on each of the activities, which are available on request.

Information: 514-496-8282 or 1-866-487-8282 (toll free),
reservations.biosphere@ec.gc.ca or www.biosphere.ec.gc.ca,
"Activities for Groups" section.

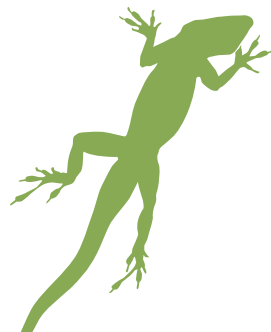
The Biosphère is pleased to present its Youth Program, which offers a wide range of activities adapted to the needs and interests of elementary and high school students and teachers across Canada.

Through play, experimentation and creation, students will develop their teamwork, co-operation and problem-solving skills, and learn to apply them to environmental protection.

Youth Program activities are held at the Biosphère, in class, in the field or via distance learning in real learning situations.



IF YOU LIKE
EXPLORING THE OUTDOORS,
COME AND DISCOVER
OUR EARTH
CLOSE UP...



“Environment and Science” activities

These activities, with links to the world of science and technology, explore one or more of the following themes: water, the St. Lawrence River, meteorology, climate change and responsible consumption.


Guided tours

- Guided tours of the Biosphère: general or themed.
- One-day combined guided tour of the Biosphère and the Stewart Museum (activities of your choice).

“Environment and Observation” activities

In class or in the field, young people take part in concrete observation and ecoaction projects. They collect data on water quality, climate change, water conservation, fish health, frogs and other indicators of ecosystem health, or observe their own life habits with a view to making changes to them. For certain activities, training, activity guides, materials or field guides are offered to teachers. Many of these projects are directly accessible over the Internet. The projects last at least two hours and may extend over the whole school year. Some of these activities are co-ordinated by the Biosphère’s collaborators.

Choose the activities that correspond to your level...

																						
		Pre-school	Elementary – Cycle 1	Elementary – Cycle 2	Elementary – Cycle 3	Middle school	High school	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March	April	May	June	July	Aug.	pages		
Activities		Target Audience																				
At the Biosphère	The Eel Squad*	Pre-school	●					[Activity available from Sept to Aug]													6	
	Water Explorers*	Elementary – Cycles 1 and 2		●	●			[Activity available from Sept to May]													6	
	The Secret of Gilgamesh*	Elementary – Cycle 2			●			[Activity available from Sept to May]													6	
	On the Water Trail*	Elementary – Cycle 3				●		[Activity available from Sept to May]													6	
	Where Water Tells Tales*	All (except pre-school)		●	●	●	●	●	[Activity available from Sept to Aug]													7
	Biosphère – Stewart Museum*	All	●	●	●	●	●														7	
Biosphère at your school	A Change in the Air*	Middle school, high school and college				●	●	[Activity available from Sept to May]													5	
	Too Late...*	High school					●													5		
In class or in the field	Agent X Project**	Elementary – Cycle 2 to middle school			●	●	●	[Activity available from Oct to May]													8	
	H ₂ O Project	Elementary – Cycle 3				●		[Activity available from Sept to Aug]													8	
	Adopt a River	Elementary – Cycle 3 to high school				●	●	[Activity available from Sept to Aug]													8	
	FrogWatch***	All	●	●	●	●	●	[Activity available from Sept to Aug]													9	
	PlantWatch***	All	●	●	●	●	●	[Activity available from Sept to Aug]													9	
	IceWatch***	All	●	●	●	●	●	[Activity available from Sept to Aug]													9	
	WormWatch***	All	●	●	●	●	●	[Activity available from Sept to Aug]													9	

* Activity offered mornings and afternoons

** Limited enrolment

*** Activity developed and managed by Environment Canada's Ecological Monitoring and Assessment Network

“Environment and Science” activities

> *Biosphère at your school*

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NEW!



A Change in the Air

Target audience: Middle school, high school and college

Duration: 50 to 75 minutes

This unique educational activity fosters discussion about the very latest scientific information on air quality and climate change, their impacts on the environment and what we can do about it. It includes several visual simulations and provides an opportunity for exchanges between students and an expert facilitator. This free activity is offered through presentations in schools in Montréal and the surrounding area, and by videoconference in other Canadian educational institutions.

NEW! *Available in French only*

Too Late...

Target audience: High school

Duration: 75 minutes

Mouch, Mimi and Rou take up their high school principal's challenge to go green. Despite Rou's ambivalence and Mouch's doubts, will they succeed in helping their school become the most ecological in Quebec?

Too Late... encourages teenagers to adopt responsible consumption habits. They will surprise themselves by wanting to take steps to save the environment, like Mouch, Mimi and Rou. This travelling play is presented in schools in Montréal and the surrounding area. Script: Anne-Marie Olivier. Production: Reynald Robinson. A Théâtre Ébouriffé production, in collaboration with the Centrale des syndicats du Québec (CSQ) and the Biosphère.

Information and reservations: 514-605-6435 or evebouchard@videotron.ca

> At the Biosphère



The Eel Squad

Target audience: Pre-school

Duration: 90 minutes

A humorous and endearing eel (puppet) from *The Eel Squad* guides youngsters along the waterways from their house to the river. The eel reveals the wonders and friends of water, but also explains that the waste that is being discharged into the water is damaging its habitat. Together, youngsters and the eel look for ways to clean up its home. Each student returns home with a token eel of their own creation as a souvenir of their participation.



The Secret of Gilgamesh

Target audience: Elementary – Cycle 2

Duration: 90 minutes

King Gilgamesh seems to control the weather: when he's in a good mood, the weather will be fair, but if he's angry, rain and thunderstorms must be expected. Because of a series of extreme weather events, the King's friend Enkidou persuades him to reveal his secret to the people of Uruk. In the course of the activity, with the interpretative guides' help, students discover the usefulness of various weather instruments, learn about the water cycle and certain extreme weather phenomena. While playing an object-association games, they explore different ways to reduce greenhouse gas emissions, thus becoming Climate Guardians.



Water Explorers

Target audience: Elementary – Cycles 1 and 2

Duration: 90 minutes

The activity is led by a modern-day *coureur de bois* (fur trapper) who teaches the children to respect nature while they take up the three water challenges: beauty, strength and fragility. Thus, they gain knowledge of water and aquatic ecosystems. Throughout their visit, they collect amulets to add to their explorers' necklace, which also bear the beauty amulet that they create themselves.



On the Water Trail

This activity is offered at the Biosphère only or combined with a Stewart Museum activity.

Target audience: Elementary – Cycle 3

Duration: 90 minutes

Biosphère activity: interpretative guides encourage students to learn about the economic and social importance of the St. Lawrence River. Following the Water Trail at the Biosphère, they see how humans have altered the river over the years, and they are introduced to the environment-related issues of navigation, ethical consumption and access to drinking water.

Target audience: Elementary – Cycle 3 **Duration:** 4 hours (including lunch period)

Activity combined with a Stewart Museum activity: in addition to the Biosphère activity, students take a trip through time at the Stewart Museum. They learn about their 19th-century ancestors' close relationship with the St. Lawrence. The marked walking trail (30 minutes) between the two institutions gives students a glimpse of water-related vestiges of the past. An interactive map is provided to the teacher to facilitate travel along the trail.



Guided tours

> *At the Biosphère*

Where Water Tells Tales

Target audience: All (except pre-school)

Duration: 90 minutes

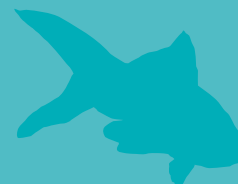
The Biosphère, housed in Richard Buckminster Fuller's magnificent geodesic dome, provides guided tours tailored to your group's age and interests. Discover the history of the dome itself and its famous designer. At your choice and depending on the availability of exhibition halls, your group can work through the challenges of the *Water Wonders!* exhibition, go on an excursion through the interactive activities of the *Moving Giant* exhibition, devoted to the St. Lawrence River and the Great Lakes, or explore the principles of sustainable development in the *Planet Bucky* exhibition. To complete your tour, a number of activities are offered depending on hall availability: the *Creative Workshop*, the *Aqualab* or the multimedia shows in the *Connexions* Hall.

Biosphère – Stewart Museum

Target audience: All

Duration: 4 hours (including lunch period)

Take part in activities at both the Biosphère and the Stewart Museum in a single day. This guided tour is offered according to availability of activities.



“Environment and Observation” activities

> *In class or in the field*



Agent X Project

Target audience: Elementary – Cycle 2 to middle school
Duration: Minimum 15 hours

On the general theme of climate change, students are given various environmental missions of their teacher’s choice. These missions give them an opportunity to find and apply solutions to reduce their green house gas emissions. They thus become multiplying agents whose role is to help their peers reduce their energy consumption. The *Agent X Project* uses a dynamic approach and captivating equipment* on loan from the Biosphère. Training and scientific support provided. **This is a classroom activity, and enrolment is limited.**

Information: 514-496-8282 or 1-866-487-8282 (toll free)

* The equipment is free if the teachers agree to share the results of their research with the Biosphère.



Project H₂O

Target audience: Elementary – Cycle 3 **Duration:** Minimum 10 hours

After reviewing their water consumption at school or at home, with the aid of an online calculator, students look for ways to cut down on the amount of water they use. Three missions are offered, at the teacher’s choice. A Web site has been put up so that the results may be shared with schools here and elsewhere. **This is a classroom project.**

Information: www.on.ec.gc.ca/reseau/watercalculator/login_e.html, “Project H₂O” section



Adopt a River

Target audience: Elementary – Cycle 3 to high school
Duration: 25 hours

Students evaluate water quality in a river in their community by identifying benthic macroinvertebrates and/or by analyzing six physicochemical and bacteriological parameters. In this way, they succeed in understanding their environment and identifying action they can take to improve it. Training and scientific support provided. **This is a field project.** This project is co-ordinated by the Comité de valorisation de la rivière Beauport (CVRB) [Beauport River enhancement committee] with the support of the Biosphère.

Information and reservations: www.cvrbc.qc.ca



FrogWatch

Duration: Variable

Target audience: All

Observation of frogs and toads may help us understand the changes taking place in the environment. The participants choose a lake, pond or wetlands area close to home, learn to recognize the cries of frogs and toads, then post their findings on a Web site. This project is part of *NatureWatch*, a series of voluntary monitoring programs designed to try and identify ecological changes that may be affecting our environment. **This is a field project.** This project is co-ordinated by Environment Canada's Ecological Monitoring and Assessment Network.

Information and reservations: www.naturewatch.ca



PlantWatch

Target audience: All

Duration: Minimum 3 hours

Blooming times are excellent indicators of climate change and its effects. On a Web site, the participants track these changes by recording the flowering dates of selected plants. These plants include certain wildflowers, lilacs and even dandelions. This project is part of *NatureWatch*, a series of voluntary monitoring programs designed to try and identify ecological changes that may be affecting our environment. **This is a field project.** This project is co-ordinated by Environment Canada's Ecological Monitoring and Assessment Network.

Information and reservations: www.naturewatch.ca



IceWatch

Duration: Minimum 2 hours

Target audience: All

On a Web site, participants record their observed dates of "freeze up" and "break up" for a nearby lake or river. Ice observation gives excellent clues to the effects of climate change. This project is part of *NatureWatch*, a series of voluntary monitoring programs designed to try and identify ecological changes that may be affecting our environment. **This is a field project.** This project is co-ordinated by Environment Canada's Ecological Monitoring and Assessment Network.

Information and reservations: www.naturewatch.ca



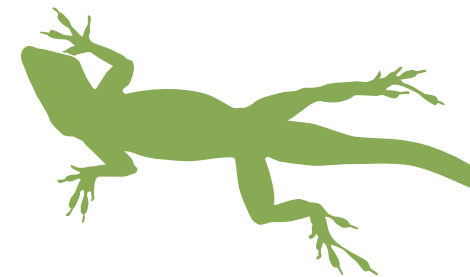
WormWatch

Target audience: All

Duration: Minimum 3 hours

Participants prepare a worm inventory by sampling and identification. The data gathered, which is published on the Internet, gives insight into soil biodiversity. *WormWatch* includes classroom activities and others to be done in the schoolyard. This project is part of *NatureWatch*, a series of voluntary monitoring programs designed to try and identify ecological changes that may be affecting our environment. **This is a field project.** This project is co-ordinated by Environment Canada's Ecological Monitoring and Assessment Network.

Information and reservations: www.naturewatch.ca





Information and reservations

For activities
“At the Biosphère” and
“Biosphère at your school”:
514-496-8282 or
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or
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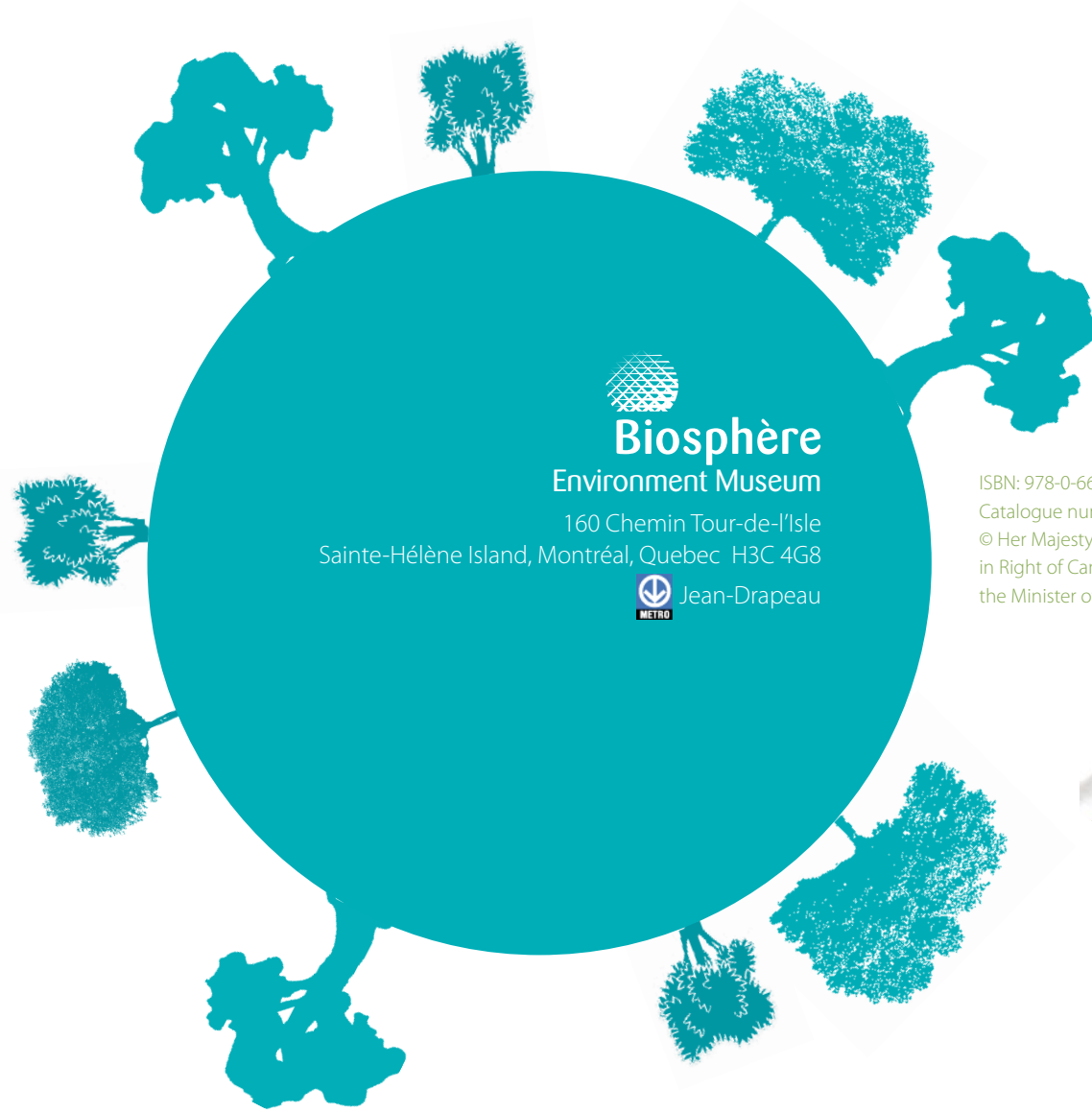
Contact information for activities
“In class or in the field”
is provided on pages 8 and 9.

Financial support

- “Soutenir l’école montréalaise” [Support Montréal Schools] Program
This program of the ministère de l’Éducation, du Loisir et du Sport du Québec [Quebec Department of Education, Recreation and Sport] is intended for schools considered disadvantaged and affords them better access to cultural institutions. To find out whether you are eligible, call 514-596-7977.
- “La culture à l’école” [Culture in School] Program
The ministère de la Culture, des Communications et de la Condition féminine du Québec [Quebec Department of Culture, Communications and Status of Women], in partnership with the ministère de l’Éducation, du Loisir et du Sport du Québec [Quebec Department of Education, Recreation and Sport], offers various school assistance programs combining culture and education. For example, it is possible to get a discount on school bus transportation. Go to the Web site at www.mcc.gouv.qc.ca, click on “Secteurs d’intervention”, then on “Éducation et formation”, and finally on “Programme La culture à l’école” for more information.

Also available:

- Free parking for three buses
- Lunch room (by reservation only)
- Picnic area (seasonal)
- Wheelchair access
- Directions to get to the Biosphère



Biosphère Environment Museum

160 Chemin Tour-de-l'Isle
Sainte-Hélène Island, Montréal, Quebec H3C 4G8



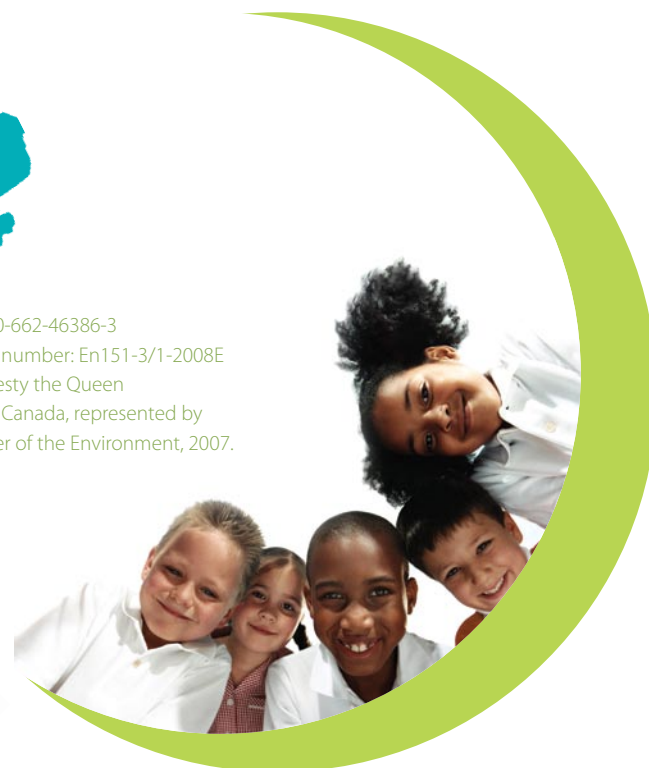
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