

The Saguenay-St. Lawrence Marine Park: A Protected Territory



Source: Flickr / Jenny & Jan

The following learning and evaluation situation uses images as a learning tool. Its purpose is to help students discover and understand the role played by protected areas on Earth by closely examining an example of a unique Canadian territory: the Saguenay-St. Lawrence Marine Park. This LES was developed through a special collaboration between Parks Canada, LEARN Québec, the Direction des ressources didactiques of the Ministère de l'Éducation, du Loisir et du Sport and the Récit national de l'univers social.

Voir la version française à <http://recitus.qc.ca/sae/secondaire/parc-marin>

Available Sections and Documents:

- **Introduction (Hook)**
- **Sequence 1: Protected territories around the world (C3)**
- **Sequence 2: The Saguenay-St. Lawrence Marine Park territory (C1)**
- **Sequence 3: Issue: the balance between protection and use (C2)**
- **Other downloadable supporting documents:**

**A Student Workbook
Appendices**

Teaching guide

Overview:

The LES *The Saguenay-St. Lawrence Marine Park: a protected territory* uses images to facilitate student learning. It is divided into three sequences that address the three subject-specific competencies related to the geography program.

The first sequence (competency 3) will allow students to construct their consciousness of global citizenship by studying three of the world's great parks. The second and third sequences (competencies 1 and 2) deal with the Saguenay-St. Lawrence Marine Park. Students will study the territory of this unique protected area as well as the conservation issues it raises.

Competency development

Broad Area of learning:

Environmental awareness and consumer rights and responsibilities

Educational goal: to encourage students to develop an active relationship with their environment while maintaining a critical attitude towards exploitation of the environment, technological development and consumer goods.

Focuses of development: awareness of his/her environment, construction of a viable environment based on sustainable development.

Social Sciences subject competencies

Competency 1: Understands the organization of a territory

Competency 2: Interprets a territorial issue

Competency 3: Constructs his/her consciousness of global citizenship

Cross-curricular competencies

Uses information and communication technologies

Introduction



Estimated duration: 30 minutes

Goal: to help students become aware of the importance of protected territories throughout the world – example of the St. Lawrence beluga.

Procedure:

1. Present a few images and the time line showing the belugas and the threats they face, and lead the students in a discussion to identify the problems, threats and players.
2. Initiate an in-class discussion on the following topic: Why should we be concerned about the fate of belugas today?

Options:

- For a more detailed introduction, visit [this Parks Canada Web site](#). Suggestions there include visiting a national park, becoming a volunteer, or even writing to your member of parliament to present your position on national parks
- To contribute to the debate, you may view a video of Severn Suzuki giving a speech at the UN Earth Summit in 1992: <http://www.youtube.com/watch?v=oJJGuIZVfLM>

Sequence 1: Protected territories around the world



Estimated duration: 2.5 courses of 75 minutes

Subject-specific competency: to construct his/her consciousness of global citizenship

Cross-curricular competency: uses ICT

Goal: to help students understand the purpose and organization of protected territories around the world by studying three examples.

Procedure: three-step process

Task 1

Read Appendix 1 documents and have a group discussion on the three territories presented.

- The teacher can relay the information to the students by means of a presentation. He/she can also ask them to read the fact sheets and then validate the information in groups. The important thing is to ensure that students have obtained the information they need to move on to Task 2. This task as such is not evaluated.

Task 2

Students will create a map by using the Cartograf online mapping application

They must correctly locate the three parks and inscribe their characteristics in a point or shape "description window". (View sample Cartograf maps on the site, and use the Help section to learn how to use it.)

Note: Students may use any software that allows them to produce maps. Cartograf is recommended since the account creation process is simple, and support in this process is available at cartograf@learnquebec.ca (if for example students don't have email accounts)

Note2 : Each point/shape description window must also contain two photos that are representative of the territory. Students will find previously selected and royalty free photos in RÉCITUS's image bank by typing the key word SAE1 in the search engine of the application.

<http://www.recitus.qc.ca/ressources/banque-images>

Or use a site like photosforclass.com

Answer key for the map and “Info Windows”

Des territoires protégés (Map1) 3 repère(s) enregistré(s)

POWERED BY Google | 2000 mi | 2000 km | Données cartographiques ©2010 AND, Geocentre Consulting, MapData Sciences Pty Ltd, PSMA, MapLink, Tele Atlas - Conditions d'utilisation

Explorateur de cartes | Recherche

Mes cartes | Des territoires protégés

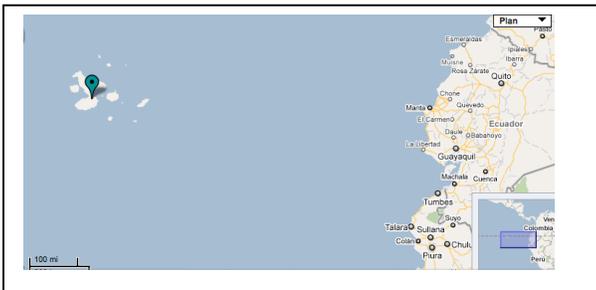
Titre	Nom/ID	Adresse	Latitude	Longitude
Îles Galapagos			0° 42' 11" S	91° 0' 9" W
Parc national de Shark Bay			26° 1' 47" S	113° 47' 57" E
Baie d'Halong			20° 53' 4" N	106° 57' 7" E



Ha Long Bay

Located in Northeast Vietnam. Landscape of extraordinary beauty and exceptional biological diversity. Karst formations of great geological value. Steep islands and islets covered in undisturbed vegetation, spectacular caves. Urban development and tourism pose a threat to the bay. More than 1.7 million visitors each year, densely populated area. Strict regulations implemented to protect this region.

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Galapagos Islands

An archipelago of volcanic islands located off the coast of Ecuador in the Pacific Ocean. A living museum of natural history featuring a number of unique plant and animal species. Home to giant tortoises and volcanic phenomena. First site to be inscribed on UNESCO's World Heritage List in 1978. The 4 largest islands are inhabited by 20 000 people. Attracts 150 000 visitors each year. Tourism and immigration are the greatest threats to this area.

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Shark Bay National Park

Vast marine reserve located on Australia's west coast. Exceptional natural environment featuring hundreds of rare animal species (fish, mammals, birds). Home to the largest seagrass bed in the world and some of the world's rarest stromatolite colonies. Threatened by humans, who have introduced foreign species. 100 000 visitors each year, 1000 inhabitants.

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Task 3

Students will use the information gathered in Tasks 1 and 2 to report their findings concerning the territorial issue.

Answer key: global aspect

A- Do you know of any **other protected territories**, in this country or elsewhere in the world? Name them:

- students give the names of other parks or protected areas and provide a few details about each one.

B- What do these territories and the three sites being studied have **in common**?

- they contain rare or threatened animal and plant species or rare geological elements
- actions have been taken to protect them
- they are major tourist attractions

Answer key: human actions

C- What is the **source** of the **threat** faced by natural areas?

- students should identify different types of human activity such as tourism, urban sprawl or a commercial activity, for example.

D- As you understand it, why are these territories protected?

- to acknowledge their value
- to protect the endangered species and landscapes

Answer key: your opinion

E – Do you think that these territories should be protected? Is too much or too little being done? **Justify your opinion** by providing two **examples** related to the territories being studied.

- the students should base their opinion on arguments, preferably supported by the concepts and relevant elements of the issue such as natural heritage, protected area, conservation/preservation, UNESCO and regulations.

F – Do you think that inscribing the sites on **UNESCO's World Heritage List** has had a major **impact**? If so, what is the impact? If not, explain why:

- the students' answer should emphasize the paradox that exists between the increase in tourism caused by the presentation of the sites and the added pressure this increase places on the protected territory.

Sequence 2: The Saguenay-St. Lawrence Marine Park territory

Task: Draw a geographical sketch of the marine park



Estimated duration: 2.5 courses of 75 minutes

Subject-specific competency: Understands the organization of a territory

Cross-curricular competency: To use ICT

Goal: To have students actively use images (in this case: the sketch, photos and icons) to further their knowledge and understanding of a territory, its components, development and issues.

Procedure: Classroom work. Reading and understanding the appendices. Drawing a sketch by using an outline sketch drawn for this purpose. Writing short explanatory texts (“Info Window” s) that will be incorporated into the sketch.

Task 1: Drawing a geographical sketch

1. The purpose of this task is to present the marine park in general terms. The teacher is invited to supplement the reading of the text with a general presentation of the park, including the concepts of marine protected area, natural heritage and cultural heritage. The following relevant documents can be used to enhance your presentation of the Saguenay-St. Lawrence Marine Park. (Note also that [Parc Marin now has a Youtube channel](#))

- Natural Riches presentation:
http://parcmarin.qc.ca/nature_riches.html
- Cultural Riches presentation:
http://parcmarin.qc.ca/cultural_riches.html
- The St. Lawrence Estuary, Beyond the Surface video:
<https://www.youtube.com/watch?v=HN5tAUZ-fyg>
- The Saguenay–St. Lawrence Marine Park introduction video
<https://www.youtube.com/watch?v=A7B8xiTwQyw>
- The Parks History
<http://parcmarin.qc.ca/history.html>
- A few images of the park:
[http://parcmarin.qc.ca/#prettyPhoto\[pp_gal\]/0/](http://parcmarin.qc.ca/#prettyPhoto[pp_gal]/0/) and
<https://www.flickr.com/photos/64630750@N08>

This map (available in Appendices 2 and 3) can be used to help students accurately locate the park on the map of Québec:

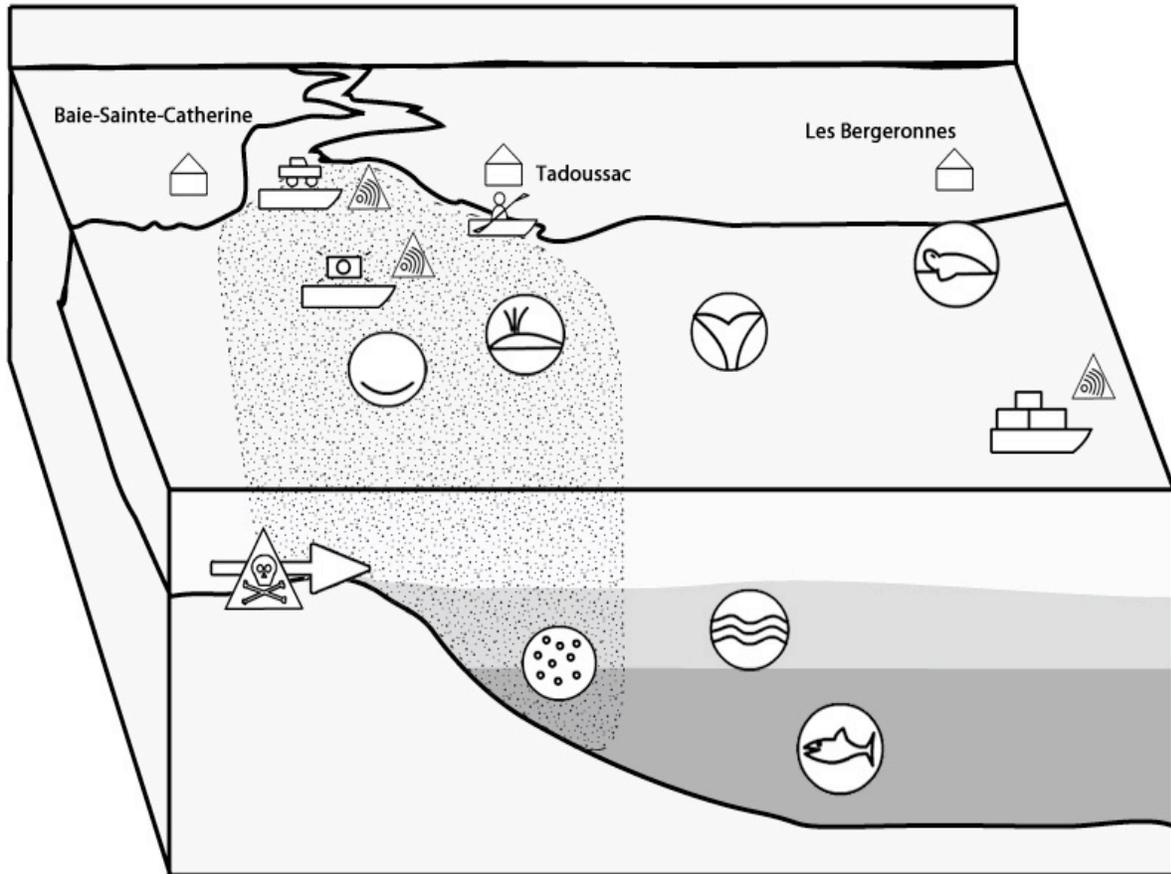


Task 2: Drawing the sketch

1. Students will draw their sketch in class. They can copy the icons and pictograms provided in the legend (see Appendix) into the outline sketch provided. Students can also download the outline sketch of the marine park into drawing software.
2. The teacher is invited to draw the sketch as well; this is the best way for him/her to master the activity.
3. The student book, which describes the steps involved in drawing the sketch, can be distributed in printed format or viewed online on the LES Web site.
4. **CAUTION! Two versions of the legend were included at the end of the appendices: one with and one without the names of the icons. If you wish to have your students complete the legend themselves, make sure you delete the last page before you print the appendices.**
5. The answer key to the sketch is provided below. Of course, students are given some leeway in positioning the icons. A good knowledge of the territory will allow you to properly evaluate your students' sketches.
6. Some students might have difficulty understanding the concepts of internal and external threats. To avoid confusion when you give students instructions, specify that the big arrow on the icon symbolizing the pollutant indicates that it travels or moves, in short, that it originates outside the park (unlike noise, which is produced inside the park).

Note: Cartograf has built-in image editors for images attached to any point/shape. This could also be used to do the sketches provided the appropriate background/cross-section is uploaded into a point/shape.

Organization of the Saguenay-St. Lawrence Marine Park territory



Task 2: Writing and adding the “Info Windows”.

Answer key for the “Info Windows” :

Threatened species	BELUGA: gregarious marine mammal living in the marine park, where it feeds on fish and invertebrates. It was decimated by hunting, which is now prohibited. Local and external pollution are degrading its habitat. The species is also threatened by noise and vessel traffic.
Threatened species	BLUE WHALE: endangered marine mammal living in the Atlantic ocean, the Gulf of St. Lawrence and the St. Lawrence Estuary. It feeds on krill and zooplankton. Local threats: noise, vessel traffic, water pollution. External threats: pollution, commercial fishing, incidental catches, climate change.
Threatened species	ATLANTIC COD: fish living in the cold, deep waters of the ocean and estuary. It is a favourite food of animals such as seals. It feeds on small fish, invertebrates and crustaceans. Fishing, which was once a large-scale activity, threatens the survival of the species due to its small population. Sports fishing and changes affecting its habitat are also threatening its existence.
Type of transportation	FERRIES: 42 000 passengers each year, between Baie-Sainte-Catherine and Tadoussac. Busiest in summer.
Type of transportation	CRUISE SHIPS: whale watching sea tours, 9 000 boat outings per season, totalling 284 000 visitors. Very lucrative for the tourism industry: whale watching brings in 80 million dollars annually to Québec. Despite the fact that the number of visitors has not increased, Québec is ranked 2nd in the world in this industry, with more than 35 000 ocean kayak outings each year in the marine park area.
Type of transportation	CARRIAGE OF GOODS: approximately 5500 crossings in the marine park in 2006; traffic increases every year. A total of 110 million tons of goods; large quantities of iron and oil.
Type of transportation	PLEASURE BOATING and KAYAKING: many pleasure boaters navigate through the marine park in yachts, sailboats or kayaks. They are subject to the same regulations as cruise ship operators. Boating conditions in this sector are treacherous (winds, tides and strong and unpredictable currents).

Task 3: Summary questions

Some possible answers to the summary questions are given below:

Why did the Saguenay-St. Lawrence Marine Park become a protected territory?

☆ In their answer, students should describe the site's unique qualities and the reasons for its richness.

Students should mention the following:

- The upwelling of cold water in this area fosters a biologically rich environment that serves as a haven for a variety of organisms and marine wildlife.
- This area is Canada's most southerly point where belugas may be observed.
- The marine park is home to several threatened animal species such as the beluga, blue whale and Atlantic cod.
- Various human activities take place in the protected area: carriage of goods by sea, ferry crossings, whale watching, fishing and pleasure boating.
- The marine park was created to protect the fauna and flora through the supervision of human activities taking place within the park and to foster recreational and educational activities as well as research.
- The park was also created to promote natural heritage.

CAUTION!

This list is neither exhaustive nor inflexible. It contains examples and possible answers. We suggest that you use your judgement to determine the number of elements or reasons required to merit an A, based on your groups' strength and level of understanding.

Sequence 3: Issue concerning the marine park: The balance between protection and use



Estimated duration: 3 courses of 75 minutes

Subject-specific competency: interprets a territorial issue

Goal: to have students evaluate whether the balance between protection and use is achieved in the marine park based on video interviews conducted with four of the park's main stakeholders.

Procedure: in three steps..

Task 1: Describing the issue

Task 2: Park dynamics

Task 3: Park dynamics (cont'd)

Task 4: Take action!

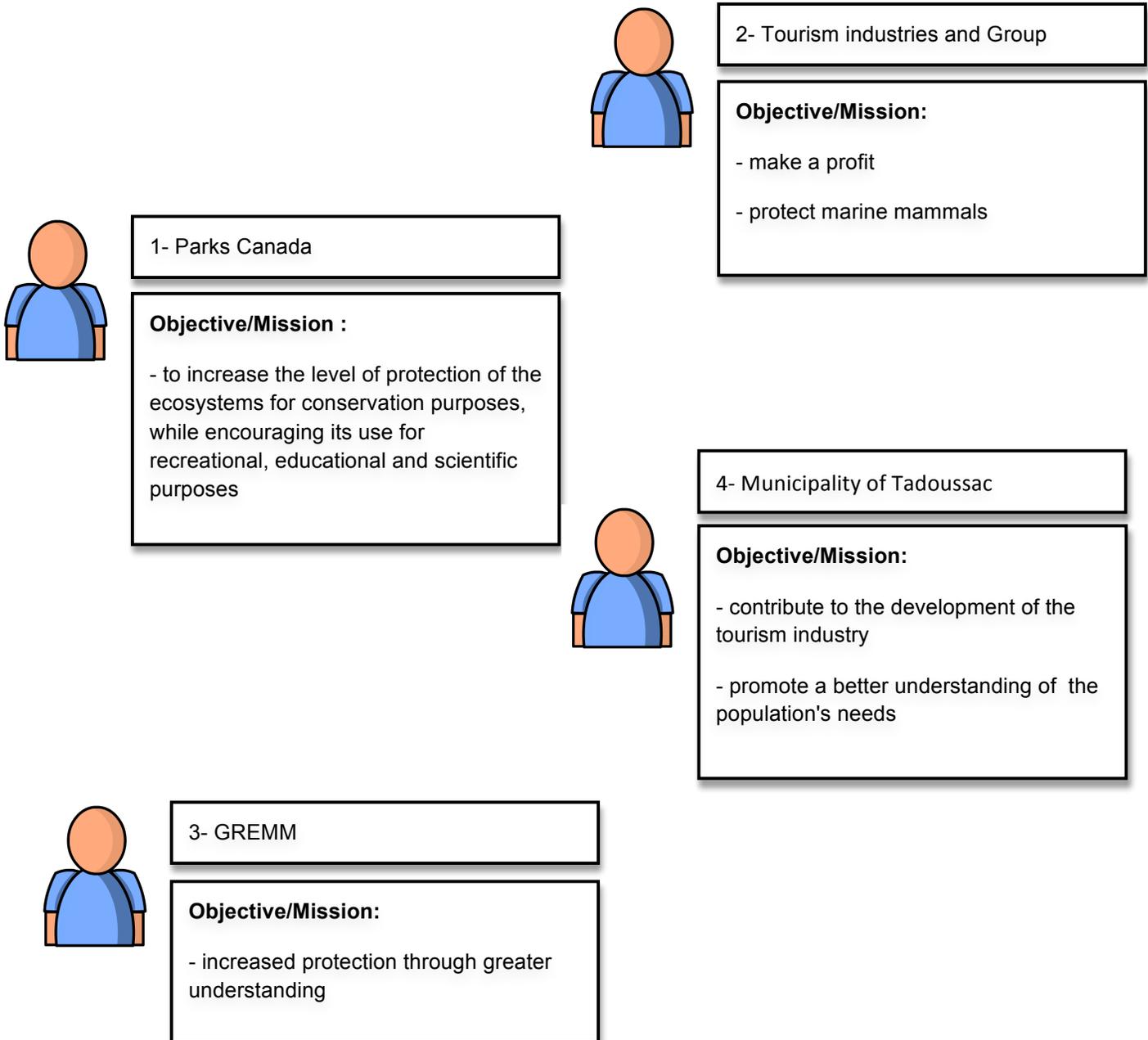
Task 4 ALTERNATIVE: Adopting a position and proposing action

Task 1: Describing the issue

Students will view Videos 1 to 4 and fill out the listening grid. This will provide them with a complete picture of the situation.

Option: students may find it helpful to construct a model of the situation after they view the Municipality of Tadoussac video, which will be the most challenging to them.

Answer key: listening grid for videos 1 to 4 – The stakeholders:



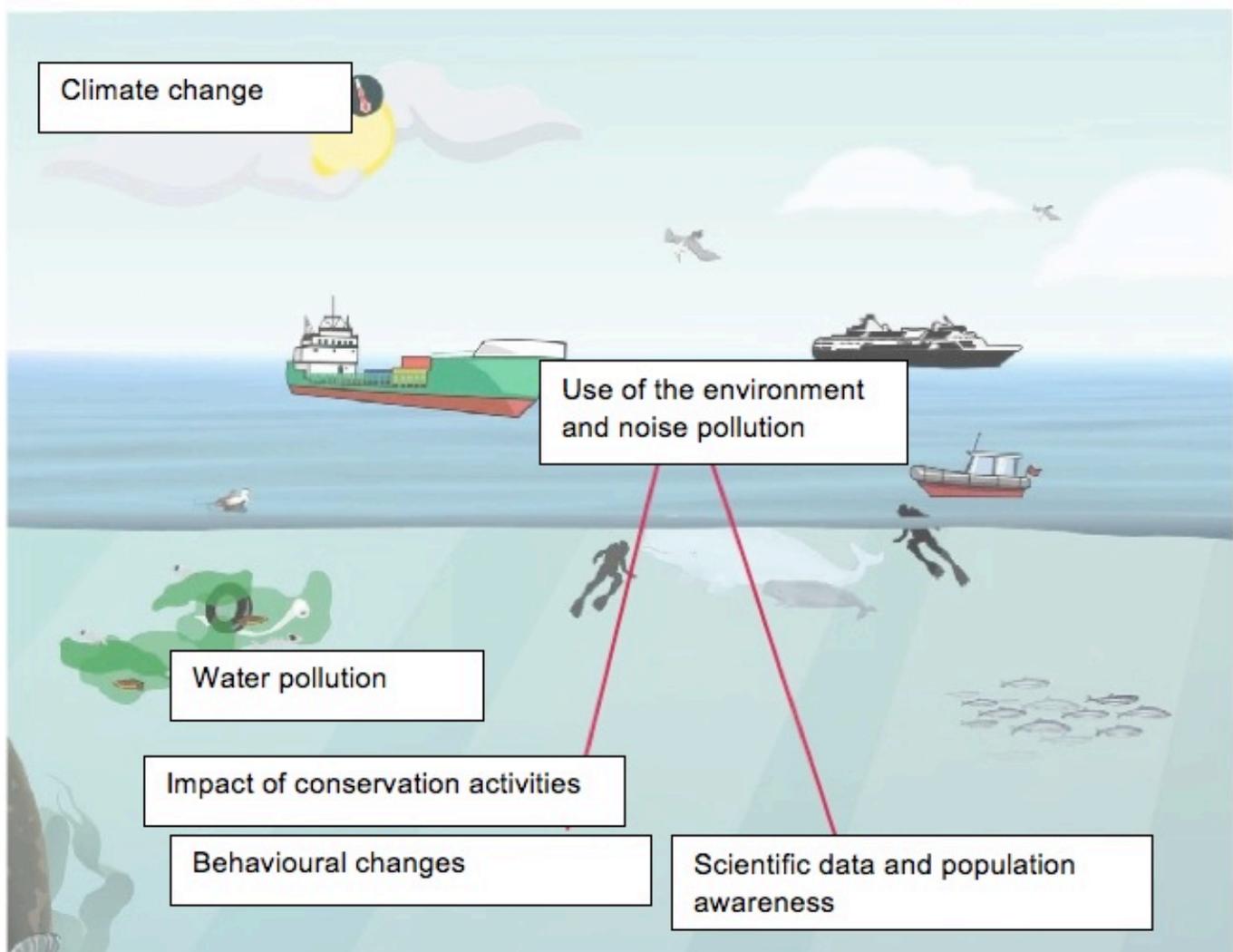
Actions/Players	1	2	3	4
Set ups educational projects such as interpretation centres and a Web site (More than one X possible)			X	
Establishes an approach distance to the whales	X			
Provides mandatory training for cruise ship captains	X			
Takes tourists on sea tours to observe marine mammals		X		
Serves on marine park committees			X	
Conducts research projects, beginning in 1985, on the habits of marine mammals and the impact of human presence			X	
Adapts its work methods to conform with park regulations		X		
Its park wardens can issue tickets to enforce the law	X			
Imposes a maritime speed limit in the marine park	X			
Is part of an industry that has provided transport for 284 000 visitors in 2008		X		
Calls for the creation of a people's advisory committee				X
Issues a marine observation licence for a maximum of 59 vessels	X			
Participates in the marine park's coordination committee (more than one X possible)				X
Lowers fishing quotas	X			

Task 2: Park dynamics

1. Students must view videos 5 and 6 and complete the sketch

- Students should work in groups on this part of the task. After they view the videos the teacher can initiate a discussion about the factors that hinder conservation as well as the impact and consequences of the protection measures taken.
- This task is not evaluated.

Answer key for the sketch



Task 3: Park dynamics (cont'd)

Students view video 7 and fill out the listening grid.

Answer key: listening grid – video 7 – Has a balance been established?

Video 7		
Players	According to the player, is there a balance between use and conservation?	What does the player propose to achieve a more appropriate balance?
1- GREMM	No	<ul style="list-style-type: none">- increase the presence of park wardens, more effective law enforcement- provide better training for stakeholders- provide visitors with more information regarding the marine park
2- Municipality of Tadoussac	No	<ul style="list-style-type: none">- impose company or visitor fees to support the municipality's and the marine park's development
3- Parks Canada	No	<ul style="list-style-type: none">- instill greater respect for regulations- make people aware of the importance of preserving the environment- increase the presence of park wardens in the marine park- broaden public awareness of the marine park- lower the speed limit at the mouth of the Saguenay River- encourage visitor contributions to support the marine park's management and educational activities
4- Tourism industry/Groupe Dufour	Yes	<ul style="list-style-type: none">- existing regulations are sufficient- open to other measures if they do not hinder operations

Task 4: Take action!

Students should answer the summary question while referring to various relevant elements surrounding the issue.

They must base their opinion on two findings they will have made during the LES.

A) Do you think that a balance between use and protection has been achieved in the Saguenay-St. Lawrence Marine Park?

Examples of findings:

The park shelters threatened and endangered species.

The number of visitors who go on whale watching tours is stable.

Marine mammals are threatened by pollution.

The municipal authorities of Tadoussac deplore the fact that fees are not being imposed.

The players are not of the same opinion regarding whether or not a balanced has been achieved.

Several other examples are also possible. It is up to you to assess their relevance.

It is also essential for the course of action proposed to be in accordance with the findings chosen by the students.

Examples of courses of action:

Send a letter to my Member of Parliament to prohibit merchant ships from crossing the marine park territory.

To impose a tax on polluting industries along the river and Great Lakes to finance protective measures taken for the marine park.

There are various other possible courses of action. It is up to you to assess their relevance.

Task 4 ALTERNATIVE : Adopting a position and proposing action

Once students have adopted a position regarding the issue, they must propose some action to achieve a more appropriate balance between use and protection of the natural heritage. They must select a means of presenting their idea:

- an open letter to the media
- an awareness campaign (in their school, their city, in another context)
- a petition (various models can be found on the Internet)
- enter the *Cliquez pour moi!* contest (<http://www.cliquezpourmoi.qc.ca/>) (French only)
- a fund-raising event
- any other means chosen by the student

Students can, and in some cases, must, work in teams.

Students should keep the following points in mind when they choose and develop their course of action

- people should readily understand the issue
- the action proposed and the expected outcomes should be clearly laid out
- the players listed should have a role in and/or some influence over the issue
- the audience they wish to inform, educate or engage, depending on the course of action, should be kept in mind: how can the appropriate people be reached? How can the greatest number of people be reached?

Sequence 1 – Competency 3:

Constructs his/her consciousness of global citizenship

Evaluation criteria	A	B	C	D	E
Expression of the global nature of a geographic phenomenon (tasks 2 and 3A)	Accurately locates 3 parks and provides 4 relevant characteristics for each park	Accurately locates 3 parks and provides at least 3 relevant characteristics	Approximately locates at least 2 parks and provides at least 2 relevant characteristics	Approximately locates at least 1 park and provides at least 1 relevant characteristic	Does not locate any parks and does not provide any relevant characteristics
AND (task 3B)	Provides a very satisfactory description of what the protected territories have in common	Provides a satisfactory description of what the protected territories have in common	Provides a somewhat satisfactory description of what the protected territories have in common	Provides an unsatisfactory description of what the protected territories have in common	Does not describe what the protected territories have in common
Consideration of the impact of human actions on the future of the planet (task 3 C, D)	Describes the impact AND origin of human actions in a very satisfactory manner	Describes the impact AND origin of human actions in a satisfactory manner	Describes the impact AND origin of human actions in a somewhat satisfactory manner	Describes the impact AND/OR origin of human actions in an unsatisfactory manner	Does not describe the impact and origin of human action
Justification of his/her opinion (task 3 E and F)	Adopts a position on the relevance of establishing protected territories and defends it in a very satisfactory manner	Adopts a position on the relevance of establishing protected territories and defends it in a satisfactory manner	Adopts a position on the relevance of establishing protected territories and defends it in a somewhat satisfactory manner	Adopts a position on the relevance of establishing protected territories and defends it in an unsatisfactory manner	Does not adopt a position

Expression of the global nature of a geographic phenomenon: _____

Consideration of the impact of human actions on the future of the planet: _____

Justification of his/her opinion: _____

Sequence 2 – Competency 1

Understands the organization of a territory

Evaluation criteria	A	B	C	D	E
Identification of relevant elements of the organization of the territory (task 1)	Very clear and coherent sketch that illustrates more than 6 natural elements in a relevant location	Very clear and coherent sketch that illustrates 4 or 5 natural elements in a relevant location	Clear and coherent sketch that illustrates 3 natural elements in an approximate location	Unclear and inconsistent sketch that illustrates fewer than 3 natural elements in a somewhat relevant location	Incomplete and/or incomprehensible sketch
	Very clear and coherent sketch that illustrates more than 6 human elements in a relevant location	Very clear and coherent sketch that illustrates 4 or 5 human elements in a relevant location	Clear and coherent sketch that illustrates 3 human elements in an approximate location	Unclear and inconsistent sketch that illustrates 1 human element in a somewhat relevant location	Incomplete and/or incomprehensible sketch
Coherent representation of the organization of the territory (task 2) The 6 “Info Window” s: Threatened species (2), Transportation (3), Tourism (1)	The 6 “Info Window” s presents the characteristics of the organization of the territory in a satisfactory manner	At least 5 “Info Window” s present the characteristics of the organization of the territory in a satisfactory manner	At least 4 “Info Window” s present the characteristics of the organization of the territory in a satisfactory manner	At least 3 “Info Window” s present the characteristics of the organization of the territory in a satisfactory manner	Most of the “Info Window” s do not present the characteristics of the organization of the territory in a satisfactory manner
Coherent representation of the organization of the territory (task 3)	The student identifies the motives behind human actions in a very satisfactory manner	The student identifies the motives behind human actions in a satisfactory manner	The student identifies the motives behind human actions in an acceptable manner	The student identifies the motives behind human actions in an unsatisfactory manner	The student does not identify the motives behind human actions
Identification of relevant elements of the organization of the territory: _____ Coherent representation of the organization of the territory: _____					

Sequence 3 – Competency 2

Interprets a territorial issue

Evaluation criteria	A	B	C	D	E
Reference to elements that are relevant to the territorial issue (task 1)	Identifies the names of the 4 groups , their objectives/interests and their actions in a very satisfactory manner	Identifies the names of 3 groups , their objectives/interests and their actions in a satisfactory manner	Identifies the names of 2 groups , their objectives/interests and their actions in an acceptable manner	Identifies the name of 1 group , its objectives/interests and its actions in an unsatisfactory manner	Does not provide any information on the groups
Demonstration of the dynamics of the territorial issue (task 3)	Identifies the positions and propositions of the 4 groups in a very satisfactory manner	Identifies the positions and propositions of 3 of the groups in a satisfactory manner	Identifies the positions and propositions of 2 of the groups in an acceptable manner	Identifies the positions and propositions of 1 group in an unsatisfactory manner	Does not identify the positions and propositions of the groups
Expression of a well-founded opinion (task 4)	Expresses a very satisfactory opinion based on 2 relevant findings AND proposes a realistic course of action	Expresses a satisfactory opinion based on 2 relevant findings AND proposes a realistic course of action	Expresses an acceptable opinion based on 1 relevant finding AND proposes a somewhat realistic course of action	Expresses an opinion that is not based on relevant findings AND proposes an unrealistic course of action	Does not express an opinion

Reference to elements that are relevant to the territorial issue: _____

Demonstration of the dynamics of the territorial issue: _____

Expression of a well-founded opinion: _____

Example of an evaluation grid for the ICT competency

EVALUATION CRITERIA	A	B	C	D	E
Mastery of the vocabulary of information and communications technologies	The student provides a very appropriate explanation for his/her procedure and uses specific vocabulary	The student provides an appropriate explanation for his/her procedure and uses specific vocabulary	The student provides an adequate explanation for his/her procedure and uses specific vocabulary	The student provides an inadequate explanation for his/her procedure and uses specific vocabulary	The student does not provide an explanation for his/her procedure and does not use specific vocabulary
Effective use of computer tools	The student makes very effective use of the computer tools	The student makes effective use of the computer tools	The student makes satisfactory use of the computer tools	The student makes unsatisfactory use of the computer tools	The student makes no apparent use of the computer tools
Recognition of his/her successes and difficulties	The student recognizes his/her difficulties and makes very appropriate suggestions to improve	The student recognizes his/her difficulties and makes appropriate suggestions to improve	The student recognizes his/her difficulties and makes acceptable suggestions to improve	The student recognizes his/her difficulties and makes unacceptable suggestions to improve	The student does not make any suggestions to improve

- Mastery of the vocabulary of information and communications technologies _____
- Effective use of computer tools _____
- Recognition of his/her successes and difficulties _____