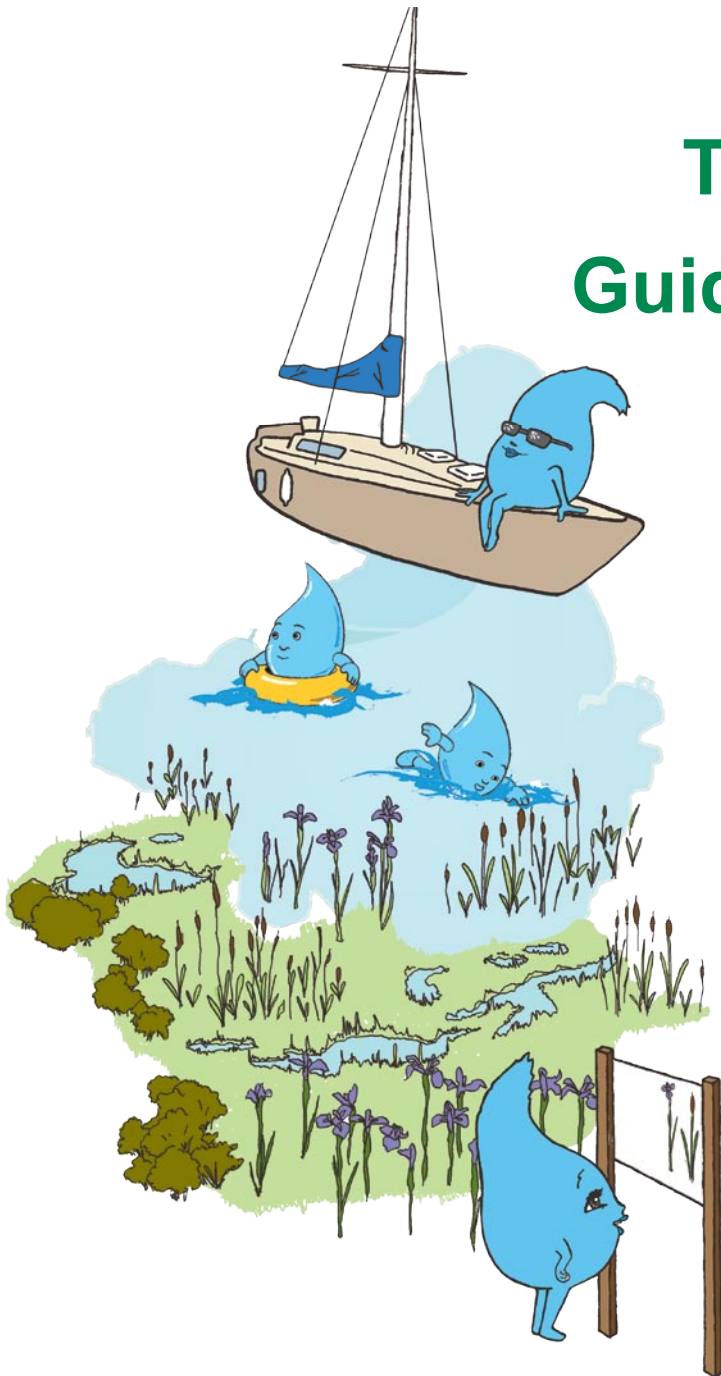


Water, water everywhere

Teacher's Pedagogical Guide to the Environment



Teacher's manual 3rd cycle primary

Overview of all activities

Discovering the lake

1a) Our lakes under the surface

This activity is an introduction to future projects for the student. By watching the film made by Pierre Brochu entitled *Nos lacs sous la surface* (Our lakes under the surface – not translated), they will learn about the fragile state of health of many lakes in Quebec. They will also

become familiar with the scientific vocabulary which is associated with water management activities as well as discovering the principle causes of the degradation of our water courses as well as some possible solutions which might be brought to bear.

1b) Le Lac-à-Nous (Our lake)

The Lac-à-Nous is a short documentary (17 minutes) which was carried out by the Val-Morin environmental advisory committee and the surrounding lake protection associations. It provides an excellent summary of the foreseeable causes, consequences and solutions to

deal with the precarious health of certain lakes and water courses. This documentary is particularly useful for reminding students about the important issues and for providing a quick initiation to students about the problems of water contamination.

2) Creation of a question-answer game about water

Throughout the activities in this guide, the students will acquire knowledge about water. Here, we would like to have them write down the information which seems particularly interesting or surprising to them, material they would like to share with their classmates

and therefore would like to remember. The fact of creating a question-answer game adds a teaching dimension which increases their chances of retaining the information.

3) The improvisation league (LIE)¹

This activity seeks to implement the written improvisation league around the theme of water. Armed with an improvisation card, the students will be led to freely and spontaneously set about writing. The selected card reveals the theme, the number of players and the category as well as the duration of the written

improvisation exercise. The LIE is an original and efficient tool which permits the student to deal with the two most difficult challenges in writing, that is practice and revision (Waddell, 1999). The improvisation league provides a solid background about the theme of water, to accompany the students throughout the year.



Source: Peter Wade, Renaissance Brome Lake

¹ The LIE is an original and efficient tool which permits the student to deal with the two most difficult challenges in writing, that is practice and revision (Waddell, 1999).

Overview of all activities

4) Our lake, our richness

This activity seeks to highlight the importance of the lake in the life of shoreline communities. It includes three phases:

- Asking the students to conduct a survey among their fellow students to determine what the lake represents for each of them;
- Offering the students the possibility of presenting an area which is particularly important for them in relation to the lake, with the help of a photo and short text;
- Creating an exhibition highlighting the witness accounts gathered and the photos.



Source: Peter Wade, Renaissance Brome Lake

Wetlands

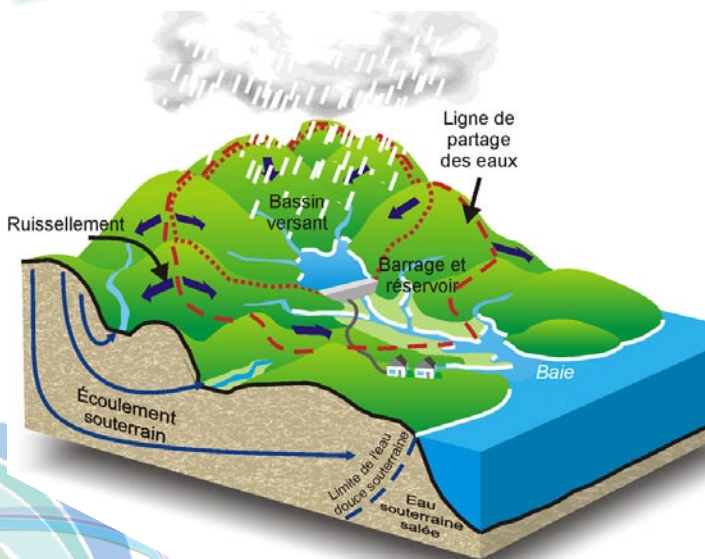
5) Wetlands through the eyes of an ornithologist

Wetlands constitute a habitat of choice and necessity for a great number of species. A good knowledge of these fragile ecological zones is a key element in preserving biodiversity. Through this activity, students will be encouraged to explore the wonderful world of

wetlands and recognize the different species of birds which live there. The first part of the activity takes place in a classroom situation, the second in the field itself.

6) Watershed and tributaries

6) Watershed and tributaries



Source: Natural Resources Canada

What is a watershed or drainage basin? Where does the water in the lake come from? And where does it go after that? This activity helps the students become familiar with the concept of the hydrographic basin and develop a more global and complete representation of the territory which they occupy. They will be introduced to a major watershed such as that of the St. Lawrence-Great Lakes and the sub-basins which make it up. A territory as large as Quebec, Canada or even North America can be looked at on different scales and this is what the student will be encouraged to do.

This theme include 3 activities :

6a - Traveling water

6b - Let's put our cards on the table

6c - Reduced-scale model of a drainage basin

Overview of all activities

Widespread pollution

7) Setting the scene: the spread of pollution from various anonymous sources

This activity will help the students understand the notion of widespread pollution from unknown sources. A brief scenario will be played out to open the door to discussions on the responsibility of each person regarding the question of water quality.



Source: Photo Imprimerie Duval

Shorelines

8) Shorelines to the rescue of bodies of water

What useful role does a shoreline play? What impact does it have on the quality of the water in lakes and watercourses? What ecological service does it offer? This activity will help the student become familiar with one of the most efficient solutions for stopping the degradation of our watercourses. Students are then invited to take action, by participating in a replanting exercise on one or several banks.

Individual responsibility

9) Inspiration – Imagination – Action!

Change is the only constant in the history of humanity. Society evolves, priorities change and lifestyle habits are transformed. Fortunately, each of us has the power to consciously contribute to making a better tomorrow. How? Everything starts with a single idea...This can take a certain time to germinate before a breath of life is given to a concrete project. For the latter to be successful, certain guidelines enter into the picture and certain tools are necessary. Here, the students are invited to discover the commitment of the citizen by joining a social action movement.



Source: Photo Imprimerie Duval

10) It is by philosophizing that we become philosophers

Through a series of short stories, the students expand their thought horizons to cover the environmental problems which human beings face today and look critically at our relationship with nature. Inspired by philosophy for children, this activity permits an analysis of the morals attached to the stories for the purpose of dealing with larger, more ethical and controversial questions.

Skills list worked on through the different activities

Skills			Activities									
			1	2	3	4	5	6	7	8	9	10
Learning domains	Language	Reading a variety of texts			•		•	•			•	•
		Writing a variety of texts	•		•							
		Oral communications	•		•	•	•	•	•		•	•
		Appreciating literary works			•						•	•
	Mathematics, science and technology	Mathematics: solving, reasoning, communicating										
		Proposing explanations and solutions to scientific and technological problems						•				
		Making good use of tools, objects and procedures from science and technology					•	•				
		Communicating, using the language of science and technology	•	•			•	•				
	Social universe	Reading about the organization of a society on its territory						•				
		Interpreting changes in a society and on its territory						•				
		Being open to the diversity of societies and their territory						•				
	Arts	Doing projects in the visual arts						•				
		Appreciating these works and those of peers						•				
	Personal development: Ethics	Reflecting on ethical questions	•						•		•	•
		Practicing dialogue	•						•	•	•	•
General training domains		Health and wellness								•	•	•
		Orientation and entrepreneurship										
		Environment and consumption	•	•		•	•	•	•	•	•	•
		Media	•			•				•		
		Living in society and citizenship	•			•			•	•	•	•
Transversal skills	Intellectual	Using information	•	•			•	•		•	•	•
		Problem solving								•	•	•
		Using critical judgement	•				•	•	•	•	•	•
		Putting creative thought to work		•	•				•	•		
	Methodological	Acquiring effective work methods			•	•	•	•		•	•	•
		Using information and communications technologies (ICT)			•	•	•	•		•	•	•
	Personal and social	Structuring one's identity				•		•		•	•	•
		Cooperation			•	•	•	•	•	•	•	•
	Communications	Communicating in an appropriate way			•	•	•	•	•	•	•	•

Source: Quebec Education Program of the Ministère de l'Éducation, du loisir et du Sport.

List of activities:

- 1- Nos lacs sous la surface (under the surface)
- 2- Creation of a question/answer game
- 3- Ligue d'impr'eu (improvisation league)
- 4- Our lake, our collective wealth
- 5- Wetlands, ornithology

- 6- Watersheds (3 activities)
- 7- Multi-point pollution (anonymous)
- 8- Shorelines
- 9- Inspiration-Imagination-Action!
- 10- It is when we philosophize