

This Lake Alive!

An Interdisciplinary Handbook
for Teaching and Learning
about the Lake Champlain Basin

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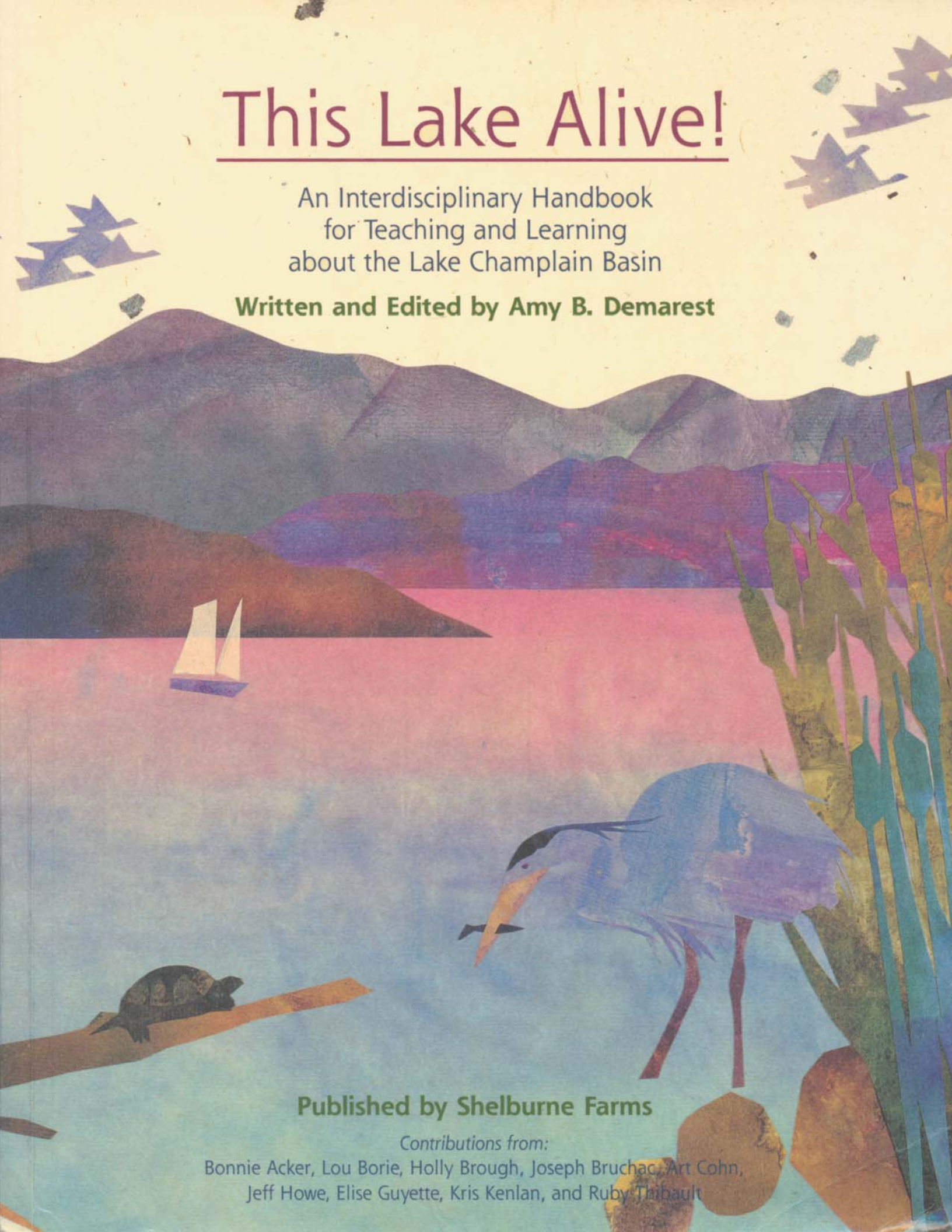


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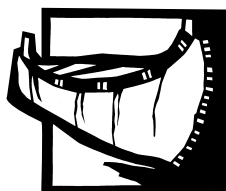


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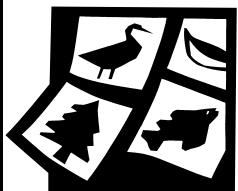
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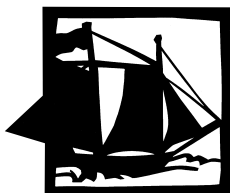
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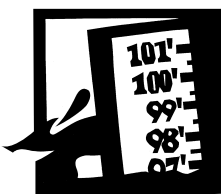
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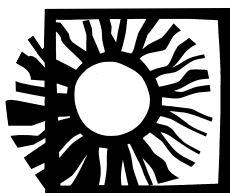
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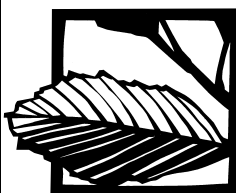
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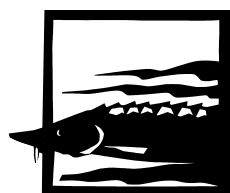
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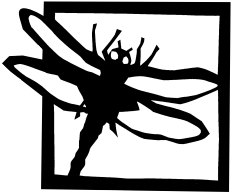
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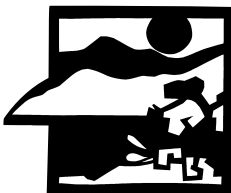
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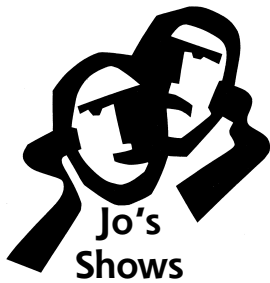
How to Use This Book

Everything in this book is submitted to you with the understanding that it will evolve and be embellished—and that’s the point! We’re all so good at what we do and every part of this book will undergo a multitude of permutations when you start to tailor it to fit you and your classroom. A resource as rich and varied as the Lake Champlain Basin means that your program will change as you engage your students in real, meaningful learning; because the lake IS alive!

This is not a curriculum; it is an opportunity to create curriculum. One reader likened THIS LAKE ALIVE! to a kitchen cupboard, not a recipe book. Many things will determine what pieces you use. You could choose to teach Lake Champlain solely as a math and science study with only a dollop of the humanities. It could be approached only as a course in geography or as “straight history.” The possibilities are endless.

The chapters of this book are designed to help you create an interdisciplinary study of the Lake Champlain Basin. *Geology, Geography, History, Nautical Archeology, Living Treasures* and *Ecology* contain informational essays written for the teacher and student. These essays provide information that we deemed necessary to explore specific disciplines and they may be copied for classroom use. We struggled with the need to provide the teacher with necessary information and still maintain a reading level suited for students. We feel that with guidance, students can use these essays in the classroom. Chapters also contain short highlights of important topics in a format that will let you mix pieces from different chapters.

Activities are presented with the middle level learner in mind but can be adjusted to any age—including adults. They are designed to let you choose from a variety of learning modes. Because space became an issue as THIS LAKE ALIVE! grew in size (and they say there isn’t such a thing as a Lake Champlain monster), we designed a “mini” handout. A “mini” gives suggestions for a handout, but since teachers often revise handouts to suit their needs, we didn’t give our version a complete page. When we thought it important, we did present the ideas on a full page.



*You will see this graphic next to
Jo's Shows.*

When I thought it was helpful to do so, I gave a very detailed description of how to proceed. For example, in the “Getting Started” section of *Getting Wet*, I even wrote down what to say! This was done to impart flavor rather than specifications. Usually, it reflects a tried-and-true practice that I have used because it continues to fit my students. Other suggestions for activities are explained very briefly in the column as “Other Ideas.”

The *History* and *Ecology* chapters are the two anchors of this book. They are larger because they seem to serve as foundations for all the other pieces. In each chapter we provided key resources for the teacher. The bibliography in the back of the book contains complete information on these key resources and on other books and organizations mentioned in THIS LAKE ALIVE! Keep in mind that this listing is not comprehensive but what we thought would be most helpful.

Ruby Thibault, the art teacher at School Street School, designed activities for you to use in your classroom. Although many of us are reluctant to undertake art projects in the classroom, the art activities in this book, titled “Rubies Pearls,” are designed for you to easily add a colorful dimension to your study.

Joan Robinson, the education director at the Flynn Theatre, reviewed and wrote drama activities for THIS LAKE ALIVE! Joan teaches creative drama at St. Michaels College and designed “Jo’s Shows” to help students creatively interpret the many dimensions of the Lake Champlain Basin.

One problem that I don’t think ever got fully resolved is the “Vermont-o-centrism” of this work. I live on that side of the lake, as do many of the consultants for THIS LAKE ALIVE! Although we are thinking more and more as a basin of people who share this land and water, many of our learning patterns and institutions are still tied to one state. My apologies to my neighbors in New York and Quebec for any omissions this caused.

If you have already been learning about the Lake Champlain Basin with children, I hope this book will fuel further work. If you have not been, you are about to start on a glorious adventure. Studying this land and water where we live is a truly wonderful experience—so open the cupboard and begin! Have a wonderful time!

Why Teach Kids About Lake Champlain

As expressed in the letter from Robbie, stewardship is probably the single most important inspiration for teaching about Lake Champlain. What happened to me, in a large way over ten years, happens to each child who studies the lake, who learns about its past, who contemplates its future. As they learn to love the lake, they want to protect it. That, really, is what this book is all about.

What are the hooks that will make a child growing up in New York, in Quebec or Vermont feel connected to this lake? There are many. Making a connection between a child and his or her past, between a child and this incredible natural resource, is the fire that fuels our work.

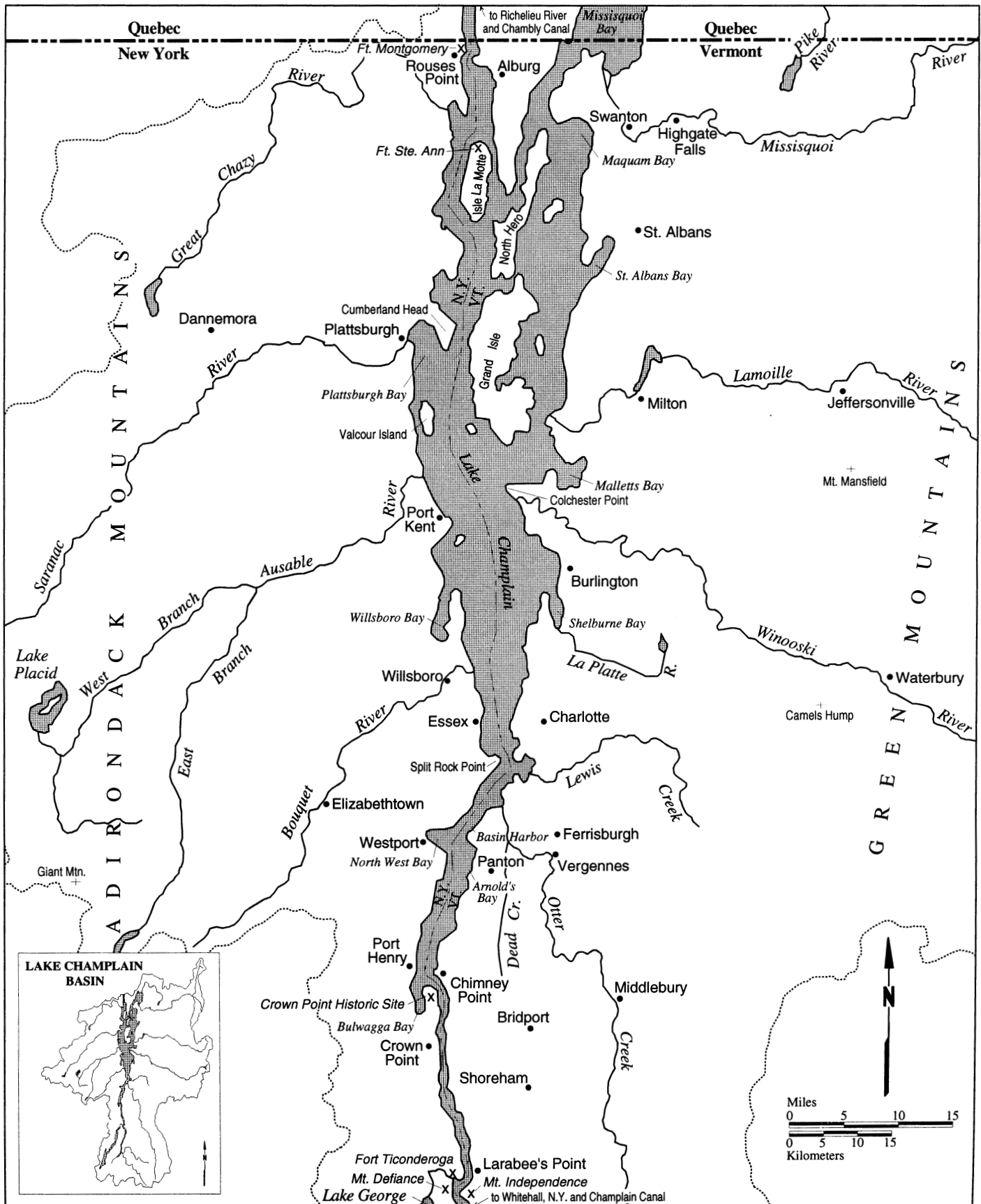
But a sound interdisciplinary study is also about other things. It is about what Chris Stevenson refers to as “rigor.” It is learning the geography of your region—what a drainage basin is and what are its implications. It’s about capitalizing proper nouns such as Crown Point, Benedict Arnold and Ojibozo. It’s about learning to distinguish historical periods and discern what a person’s life may have been like in the 1500s, canoeing up Otter Creek to fish and hunt for the winter’s food, compared to the life of a person living in the 1800s in the busy seaport of Burlington and who perhaps worked on a steamboat. It’s about learning to think clearly and critically and being able to express yourself orally and in writing, whether about applying lampricide in Lake Champlain’s tributaries or drafting legislation on future marina development on the lake. It is about all these things, and, of course, more—but that’s why I needed to write this book!

*Dear Mr. Illick,
I am very interested in the history and future of Lake Champlain.
I love to fish and go swimming in the lake.
I wish Governor Dean and the State Senate could change the way Vermonters look at the lake. They should decrease the pollution, even though it isn't as much as California.
I love the lake. If people loved it as much as I do, the lake wouldn't have all the pollution.*

*Robbie Hamilton, Grade 5
School Street School, Milton, Vermont*

Letter written to Mr. Rowland Illick, retired professor of geography, after a guest presentation of the Lake Champlain Committee's slide show, "The Ecology of Lake Champlain."

The Lake Champlain Basin



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Written and Edited by Amy B. Demarest

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Photographs by Lou Borie

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Getting Wet





Getting Wet

MAKING CONNECTIONS

This book is about connections. When building a strong interdisciplinary study, connections between community, school and home are critical. These connections are what will fuel your study and insure a meaningful learning experience for your students.

BUILDING CONNECTIONS to your COMMUNITY

As with any local study, it is important to tap into what your students already know about Lake Champlain. Many, having lived near its shore most of their lives, will surprise you with a wealth of knowledge and associations. They will tell you how beautiful the lake is and where they took their favorite boat ride and how much fun it was. Letting your students express this enthusiasm and giving it a place in the classroom will give your study a charge that no finely tuned lesson plan can match.

The first year we started our Lake Champlain study, we were swamped with stories about old camps on the lake, fishing tales and Champ sightings. There is a whole generation of grandparents out there whose favorite teenage memories are from the S.S. *Ticonderoga's* last voyages on the lake, when dances were held routinely on its decks.

Because the collection of these stories involves family members and neighbors, a local study will link your classwork to your neighborhood in many exciting ways. You can invite people in to tell stories, send kids out for formal interviews, and find ways for kids to share their findings with their community.

There are so many good reasons to connect kids to the people and things that are nearby including:

- making connections to the real world,
- recording soon-to-be-forgotten skills and stories,
- broadening your scope of support and understanding of what is happening in the classroom,
- practicing students' skills of interviewing and learning from people.

"It is a serious matter when the sense of inner connectedness with learning is weakened. Early and middle adolescence is an egocentric age. We should act as partners to that mood, not as adversaries."

Charity James

BEYOND CUSTOMS





There are many ways for students to study their “neighborhood” and see how it is connected to the Lake Champlain Basin, whether you are asking them questions based on the social sciences or on ecology.

One way is to ask your students to uncover the connections that people in their town have to Lake Champlain. This is an interview conducted by a Milton seventh grader, Todd Archambault.

“The person I interviewed was Alta White at 3:00 to 4:30 p.m. on Oct. 12, 1986. The interview was held in her Colchester, Vt., home.

She had a lot of stories to tell, she knows a great deal about the lake, like how they used to cut ice off the lake.

They cut the ice off the lake originally with hand saws. The saw was used in the same way we cut wood. They took the ice out of the water and put it on the horse drawn wagon with ice tongs. They pulled it to the ice house to save for the summer. Later they used a power saw to cut the ice and a conveyer to get it from the water to the truck.

*Alta’s father built and used a ferry. He built the ferry by lantern light for two winters in his shop. In 1910 his 36 foot long and 9 foot wide boat the **Frances Anne** was put in the water.*

The boat was used mainly as a ferry but with the use of a scow he hauled bricks, sand and gravel. The sand he hauled was used to help fill in Sunderland Hollow.

When her father was young he worked on the sailboat that brought the bricks that were used in the Catholic Church in St. Albans.

I felt the hardest part was asking the questions because my father and Miss White would get off the topic like they talked about the type of engine that was in the boat.

The most interesting part was actually after the interview when she let us see the scrapbook she was keeping.”



BUILDING CONNECTIONS *to your STUDENTS*

One of the most useful techniques I'm sure many teachers are familiar with is a student journal. Although students are free to write anything they wish in what I call "thinkbooks," they are content-based, not personal, journals. Specific topics are given, usually designed to evoke a response to an activity or class discussion, or to give them an opportunity to plan. With fifth graders, less reflective than seventh graders, I use it more often for writing "five good facts" or a "list of ideas" vs. "what do you think..." or "explain why."

At key points, I ask students to write a "Dear Ms. D." entry. It might be at a time when I sense some frustration, or after a class discussion where I think I have cleared up an issue about a project or activity and I need to hear from each student before proceeding. Sometimes it is used to just "tell me how things are going." For me, this connection is very important, especially when the pace picks up in the frenzy of an interdisciplinary study and I run the risk of losing touch.

Most thinkbook entries are written silently in class. Students always have the option of finishing an entry on their own time. If the entry is more of a specific task, such as "use four 'fort words' in good Crown Point sentences," it might be given as homework.

I check thinkbooks daily for completion, but only collect them once a week to read and respond to entries. (See *Assessment*, p. 332.)

Thinkbook Entries

- Write all the things you know about Lake Champlain.
- Write all the things you'd like to learn.
- Write a description about a place on the lake that you have been to.
- Write a song, poem or fishing ditty.
- Write about how we learn about people in the past. (Following discussion of primary and secondary sources.)
- Write about a time in history that's most interesting to you. (After our trip to the Maritime Museum.)
- Write about how the Abenakis depend on Lake Champlain to live.
- Write me a letter titled: "Dear Ms. D."

Dear Sam,
I wish you were here so you could see all the things that we got now you would be surprised. We got speedboats, ferries, and cars. We have houses and light houses. The lake is a lot dirtier than when you were alive. It must have been hard to paddle that canoe of yours down the lake. We have gunboats and army tanks now. We got a lot of different guns like rifles instead of a musket. People don't travel by boat much now that we got cars and trucks.

Jonathan Turner, Grade 5
School Street School, Milton, Vermont

This is a letter that a student wrote to Samuel de Champlain, explaining to him the things that have changed since Champlain's trip down the lake in 1609.



- Use five really good “fort” words in five great sentences about Crown Point.
- Write about your idea for your research project.
- Imagine a wetland. What do you think of?
- What is your idea for the story “Trip Around the Lake?”
- Write a letter to Samuel de Champlain titled: “Dear Sam.” (See *It’s About Time*, p. 190.)
- What are you going to teach the class during your research presentation?
- Describe the “touch lake” experience. (See *Field Trips*, p. 281.)
- Comment on your classmates’ research presentations. What did you learn?
- Write a letter at the end of your unit titled: “So Long, Sam” or “See Ya Later, Lake.”
- Write about a problem that Lake Champlain has. Explain a good solution. (After Lake Champlain Committee’s slide show “Ecology of Lake Champlain.”)





BUILDING CONNECTIONS *to your* FAMILIES

A key ingredient in a successful long-term interdisciplinary study is a strong connection between home and school. Send home a lot of information. This is critical if your study involves additional costs and schedule changes, but there are other reasons as well. As the unit evolves, your parents become part of it, thanking you for the opportunity to learn about the Lake Champlain Basin.

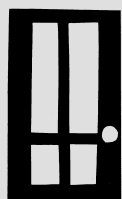
Throughout this book, there will be suggestions on how to send specific information home. Here are some general suggestions for successful parent involvement.

Be sure parents know early of:

- any additional costs for field trips and guest speakers (I usually include this information in a summer letter),
- any schedule changes that alter the regular school day,
- any special needs such as big boots for mud walks or help with an interview,
- the need for chaperones,
- the scope of the unit,
- any major research projects.



Cassie Steeves stands with her mother next to the Native American clay pot that Mrs. Sandra Steeves found while diving in Lake Champlain. The pot is on permanent loan to the Maritime Museum.



Taking It Home

This graphic appears throughout the book with a suggestion on how to build connections between the work you do in the classroom and the families of your students.



When undertaking a large unit of study, clarify student expectations in a handout sent home early in the unit. For example:

Each student will complete the following:

1. Geography map of Lake Champlain
2. Historical map of Native American peoples on Lake Champlain
3. Fact sheet of Lake Champlain
4. Creative writing: Trip Around Lake Champlain
(historically and geographically correct)
5. Artistic contribution to timeline of person, place, artifact or event
6. Science paper on Lake Champlain animal or ecology issue
7. Contribution to lake glossary
8. Tests and quizzes

Each student will maintain the following:

1. Organization of notes in student notebook
2. "Thinkbook" journal entries in response to learning activities
3. Daily homework assignments

During your study, there are a lot of different ways to communicate the content of what you are doing.

- Have students write a letter home about an event that has just happened or is about to happen. Get the letter signed and returned.
- Have students ask their parents what they know about a particular topic such as the value of wetlands or the preservation of wrecks in freshwater. Students delight in learning more than the "general public" and if parents are asked in a friendly manner, they often will communicate the views of "J.Q. Public," so students can share their knowledge. Do this as an informal inquiry (see "Preconceptions About Wetlands" in *Ecology*, p. 464) or as a formal interview (see *Research and Inquiry*).
- Encourage parents to be involved in fact-finding. Parents who have had some involvement through boating, fishing, or even diving are great resources for your classroom. Welcome this information! Newspapers are also good sources of information for family fact-finding.
- Send home a family reading assignment that you think will be of interest to parents or older siblings. Allow a few days for completion and ask homework or response sheet to be signed by the adult or adults who participated.