Heritage Trails
Exploring The Rideau Canal

Edukit
Rideau Canal Edukit

Produced in the late 1990s, this final version was released in 2000.

It was never fully implemented and the project was abandoned in the early 2000s.
The Rideau Canal, part of a national system of parks, sites and canals is one of the greatest engineering feats of the 19th century and incredibly, has enjoyed continuous operation in essentially the same manner since 1832. The entire lock system, including blockhouses, dams, weirs and lockmasters’ houses, visually represent the military strategy for the defense of 19th century Canada, the laying of the foundation for the City of Ottawa and the development of Eastern Ontario. The historic structures stand modestly unaware that they have been declared to be of national historic importance. Like pearls on a necklace, 24 lockstations are joined together by a scenic recreational waterway, offering boating between Ottawa and Kingston.

The Rideau Canal stretches 202 km through Eastern Ontario, intertwined with cycling routes, hiking trails, highways and of course, the water, providing communities along the corridor with economic nourishment, support for organizations, associations and community initiatives. The natural environment proudly displays magnificently diverse landscapes, from granite cliffs to lakes, farmlands and marshes – sanctuaries for precious birds and wildlife. It is a delicate balance of plants, animals, air, soil and water entrusted to our care.

The tradition of canal operation has been passed down through many generations to the staff today who look forward to extending personal, high quality service to all who come to learn and enjoy. Parks Canada has the responsibility to protect, preserve and present the canal, ensuring that current and future generations of Canadians, as well as people from all over the world, may experience this wondrous combination of history, culture and nature.

NOTE: If pages become lost, you may obtain replacement copies by calling the Rideau Canal office at (613) 283-5170.
Introduction

The Rideau Canal, a national historic site managed by Parks Canada, is dedicated to preserving Canada’s natural and cultural heritage. The future of this heritage corridor depends on the local community becoming actively involved in the protection of this significant symbol of our country.

Heritage Trails is an educational package designed for use both in the classroom and on canal sites. It is intended to make young people aware of the Rideau Canal, to reflect its themes and messages, to share its value as a tangible representation of our heritage, and can assist teachers in taking advantage of the canal as a local community resource. The unit is geared toward students in Grades 7-9 but may also be adapted for other grade levels.

This educational package is a compilation of several activities which may be used independently or as a basis for a whole unit of study on the Rideau Canal. Links to the Ontario Curriculum are highlighted in each activity section. The activities are designed for classroom use; however, a visit to the canal is highly recommended.

Teachers and other interested educators are encouraged to provide feedback and suggestions for improvements to Heritage Trails. For this purpose, please complete the comments sheet which is included at the back of this manual (Page 173). These evaluations will help us with revisions in order to better serve the needs of teachers and students.
Acknowledgments

The following people were instrumental in the production of “Heritage Trails – Exploring the Rideau Canal”.

Judy Sutherland – Writer/Researcher
Darlene Peeling – Editor
Carole Greig – Graphic Designer
Brian Morin – Graphic Designer
Bill Pratt – Bridge Photography
Mary Ann Ovington – Edu-kit Compilation

We would like to thank the teachers who contributed to the planning of the Edu-kit and their participation in the subsequent pilot project in the classroom. Their input was invaluable.

We would like to thank the Canadian Wildlife Federation for allowing us to incorporate ideas from their Activity Guide “Project Wild”.

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Parks Canada - Rideau Canal Edukit
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How to Use Heritage Trails

This edukit is comprised of two parts: 1) Teacher’s Manual and 2) Resources. It may be used on a step-by-step basis, or the educator is welcome to improvise and use the kit only as a guide.

Each activity section is composed of background information, the method, activities, and links to the Ontario Curriculum. The activities identify which resources to use from the resource package. Some of the resources may be used for more than one activity. Extra materials such as pictures and information sheets have been included to enrich the activities.

Audiovisual products and support documents which were not produced by Parks Canada may or may not be available in both official languages.

Please note: Portions of this resource may be reproduced by teachers for instructional use only.
Summary of Activities

Activities

**Locking Through**
Students become familiar with the concept of a lock and its anatomy. They learn about the principle of water movement in a lock and visualize how a boat is locked up or down in a lock. Students design and build a simple model lock.

**Canal Characters**
Students familiarize themselves with many terms and names used on the canal, through the use of various resource materials. Students research the meaning or definition of specific terms and names and discover the context in which they are used on the Rideau Canal.

**Dramatic Affairs**
Students participate in a variety of dramatic activities with themes related to the Rideau Canal. They express ideas, values and concerns through a selection of cooperative games and vignettes.

**Gates**
Students will learn about the various gate mechanisms used on the Rideau Canal, in the past and present, through the study of diagrams and descriptions of each gate mechanism. Students defend their views on canal conversion to a hydraulic system through either a letter of protest, a debate or a mock trial.

**To Convert or Not to Convert**
Students develop and conduct a mock trial to form a decision regarding lock conversion to a hydraulic system. They use dramatic skills to role-play characters related to the potential conversion of the canal to an electrically operated system. They develop their own opinion about the natural and historical importance of the Rideau Canal.

**To Build A Bridge**
Students become familiar with several design concepts related to bridge building. They perform activities to challenge their understanding of forces, tension, and frame design and use this information to build a model bridge.
**Plan a Trip**

Students become familiar with the Rideau Canal and its system of locks. They explore the recreational function of the system and plan a boat trip from Kingston to Ottawa. They use math and problem-solving skills in the preparation of a trip budget.

**Water’s Going On?!**

**Note:** This activity is from Project Wild and is used with permission from the Canadian Wildlife Federation. An introduction ties the Rideau Canal in with the activity subject.

Students estimate and calculate water use in school and then design and try ways to conserve water. Students record and interpret how much water they use in a day at school and make recommendations as to how they can save a significant percentage of the water.

**Wetland Metaphors**

**Note:** This activity is from Project Wild and is used with permission from the Canadian Wildlife Federation. An introduction ties the Rideau Canal in with the activity subject.

Students are presented with a selection of “hands on” objects for investigation as metaphors for natural functions of wetlands. Students describe the characteristics of wetlands and demonstrate their understanding of the importance of wetlands to wildlife and humans.

**Dragonfly Pond**

**Note:** This activity is from Project Wild and is used with permission from the Canadian Wildlife Federation. An introduction ties the Rideau Canal in with the activity subject.

Students create a collage of human land-use activities around an image of a pond. They evaluate the effects of different kinds of land use on wetland habitats and discuss and evaluate lifestyle changes to minimize damaging effects on wetlands.

**Rideau Review**

Students identify a diversity of issues related to the Rideau Canal and develop their own opinion concerning some of these issues. Students produce a newspaper containing articles about the canal.
Puzzles:

Wordsearches
Three separate wordsearches with words related to the Rideau Canal. Subjects include the canal history, environment and technology.

Canal Crossword
A crossword involving various clues related to the Rideau Canal.

Canal Quiz
Students reinforce and/or review their knowledge of different aspects of the Rideau Canal through asking and answering various trivia questions on the canal history, environment and technology.
Background

The principle of water movement in a lock is a very simple one. It is comparable to pulling the plug in your tub, or dumping a glass of water on the floor. The movement of water in both cases is due to gravity. Water runs down hill!

This simple notion is applied in the movement of water into and out of a lock. When draining a lock, sluice valves are opened and the water drains out, by gravity. When filling a lock, water flows into the lock again simply by the force of gravity. Nothing pumps water into or out of the lock.

Method

Students will become familiar with the concept of a lock and its anatomy. They learn about the principle of water movement in a lock and visualize how a boat is locked up or down in a lock. Students will work with provided materials to design and build a model lock illustrating the movement of water.

Activities

Materials:

• Diagram - Anatomy of a Lock
• Diagram - How a Lock Works

Activity 1…
Familiarize the students with the anatomy of a lock. Review the basic vocabulary of lock mechanisms (eg. lock, gate, crab, sluice, valve, etc...).

Activity 2…
Review the workings of a lock with the students. Have them describe how a lockage works going upstream and/or going downstream.

Activity 3…
Ask the students to draw a diagram of a lock and label the parts of a lock.

Activity 4…
Have the students draw diagrams of lockages both downstream and upstream. Ask them to provide a written description of the sequence followed when a boat is locked up or down.

Activity 5…
Have the students design and build a simple model of a lock.
**Anatomy of a Lock**
Locking Downstream:

1. Boat enters the lock and the lock gates are closed.

2. Lower gate valves are opened and water flows out of the lock chamber.

3. Water level starts to descend out of the lock chamber.

4. Water level is equalized.

5. Lower gate valves are closed.

6. Lock gates are opened and the boat exits the lock.
Locking Upstream:

1. Boat enters the lock and the lock gates are closed.

2. Upper wall sluice valves are opened and water flows into the lock chamber.

3. Water level begins to rise in the lock chamber.

4. Water level is equalized.

5. Upper wall sluice valves are closed.

6. Lock gates are opened and the boat exits the lock.
Model Lock

LOCKING UP

LOWER END
LOCK CHAMBER
"SLUICE CHAMBERS "PLUGGED" WHEN LOCKING UP.
"TUBING" (SLUICE TUNNEL)
"CAULKING" TO PREVENT LEAKAGE

LOCKING DOWN
"PLUG" SLUICE
"TUB TO ALLOW WATER TO DRAIN OUT OF LOCK CHAMBER."
Design Project

Visualizing the concept of a lock can be difficult, and can be made easier if you are able to see a model of a lock. Students can design and build a relatively simple model of a lock right in the classroom.

Materials:
• paper or toy boat
• 2 rubber basins (6” - 10” deep)
• rubber tubing
• bathtub or sink caulking
• a cork or other plug
• water
• Model Lock diagram
• Tool to puncture holes

Suggestions
1. Provide the students with the diagram of a model lock. Have them model this with the materials provided.

2. Provide students with just the materials, and have them create something which illustrates water movement in a lock. Hopefully you will end up with some variations on the theme.

Design Problem
The locks on the Rideau Canal raise and lower boats to another water level. Boats may enter the locks and be raised by adding water into the lock or lowered by draining the lock. There are no electric pumps used to move the water. Tunnels exist between the locks so water can move through them.

Using the materials provided here, design a model lock showing how the water flows into or out of the locks. Remember, no electricity or pumps are used, just a simple scientific concept. The water levels in each lock chamber (the basins) must be able to be lowered or raised and remain even. How will you achieve this?

Example:
1. Punch 2 small holes in opposite sides of one end of the basins, close to the bottom. Place them end to end.

2. Run tubing from one basin to the other, so it appears that 2 tunnels are running between the basins. These represent the sluice tunnels.

3. You may need to put some caulking around where you drilled holes in the basin and put the tubing. This will help prevent leakage if need be.

4. In order to illustrate water movement from one basin to another, basins should be at different levels. Place some books under one basin to make it higher.

5. Use the cork to plug the tubing in the upper chamber. Then fill it three quarters full of water. Put a toy boat in the water.

6. Pull the plugs and watch the water drain out. It’s that simple. Water is moving out of the upper lock and flowing into the lower lock, all by gravity.

7. Try this! With all the water in one basin, place the other basin on an equal level. Now pull the plugs and see what happens. Will all the water flow out? The water should even out in both basins. Gravity is still pulling water from one basin to another.
This is what actually happens when locking a boat. Once the water levels are even, the lock gates between the two locks can be opened. The boat could then move out of one lock and into another.

# Curriculum Links

## GRADE 8

<table>
<thead>
<tr>
<th>Science and Technology</th>
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</thead>
<tbody>
<tr>
<td><strong>Strand: Matter and Materials</strong></td>
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<tr>
<td><strong>Topic: Fluids</strong></td>
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<tr>
<td>Developing Skills of Inquiry, Design, and Communication</td>
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<tr>
<td>Students will</td>
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<tr>
<td>- “design and construct a model of a common device that uses hydraulic systems”</td>
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</table>

Relating Science and Technology to the World Outside the School

Students will
- “identify some design features and explain how the design makes use of one or more of the properties of fluids”

<table>
<thead>
<tr>
<th>Language</th>
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<tbody>
<tr>
<td><strong>Strand: Oral and Visual Communication</strong></td>
</tr>
<tr>
<td>Use of Words and Oral Language Structures</td>
</tr>
<tr>
<td>Students will</td>
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<tr>
<td>- “use the specialized vocabulary appropriate to the topic in oral presentations (e.g. investigations in mathematics, demonstrations in science)”</td>
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</tbody>
</table>
Canal Characters

**Background**

Many of the terms, names and words used on the canal are often not familiar to the public. The terms and names are unique in their definition, origin and use. Listed below are a few of these such words and some others which are related to the canal.

This activity will allow students to become familiar with the terms by discovering their meaning, origin and the context in which they are used on the canal.

**Method**

Students will familiarize themselves with many terms and names used on the canal, through the use of various resource materials. Students will research the meaning or definition of specific terms and names and discover the context in which they are used on the Rideau Canal.

**Activity**

**Materials**
- Vocabulary list
- Dictionaries (Oxford)
- Rideau Canal pamphlets (Resources)
4. Students can now go to work. Their job is to discover:
   
a) the definition of the word,
   b) the context in which it is used on the canal and,
   c) the origin of the word (this may be useful in some cases)

5. Once this much has been completed, have students categorize the words based on their own understanding of them. Label the categories (e.g., environment, technology etc.).

6. Take one step further and have students form word-webs or word-trees.

   Example:

   ![](crab_gate_sluice_lock_chamber_hydraulics_sill)

7. Have students form a bulletin board illustrating the words and their meaning or use the words in creative writing such as poems.
**Vocabulary List Worksheet**

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>approach</td>
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<td>bollard</td>
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<td>basin</td>
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<td>chamber</td>
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<td>conservation</td>
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<td>corridor</td>
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<td>crab</td>
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<td>draught</td>
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<td>ecosystem</td>
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<td>exotic species</td>
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<td>fen</td>
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<td>flight of locks</td>
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<td>forge</td>
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<td>foundry</td>
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<td>gate</td>
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<td>hydraulics</td>
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<tr>
<td>indigenous species</td>
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<tr>
<td>level (in a lock)</td>
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<tr>
<td>limestone</td>
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<tr>
<td>lockage</td>
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<td>marsh</td>
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<td>mooring</td>
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<td>navigable</td>
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<td>resource</td>
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<td>rubble (stone)</td>
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<td>shoreline erosion</td>
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<td>sill</td>
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<td>sluice</td>
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<tr>
<td>undertow</td>
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<tr>
<td>wetland</td>
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</tbody>
</table>
Canal Characters... answers to vocabulary

Approach
The channel of water approaching the nearest set of locks.

Bollard
A large size, black knob located on the top of a lock wall. Boats can tie their stern or bow line to this for extra support.

Basin
An area of water surrounded by land where boats can turn if need be or dock. A turning basin can be found between the top lock and the flight of 3 locks at Kingston Mills. A basin where boats can dock is located between Detached Lockstation and Combined in Smiths Falls.

Chamber
As referring to a lock chamber. The area enclosed by a set of lock gates at each end. An empty lock is often referred to as a lock chamber.

Channel
The deeper part of the canal, which guarantees safe passage for vessels. The Rideau Canal guarantees a navigable channel of 1.5 meters.

Conservation
The act of taking measures for the rational use, maintenance and rehabilitation or restoration of natural or cultural resources.

Corridor
The strip of land running along the Rideau Canal giving access to it. Communities such as Portland, Smiths Falls and Merrickville are included in this corridor.

Crab
A metal winch which is used to open and close lock gates or the sluice valves. The crab consists of 2 gears, one small one and one very large one. Locally, the winch is called a crab because it can pinch your fingers if you are not careful, just like the real crab.

Dam
A barrier built across the canal waters to hold back water. More than 2 dozen dams are on the Rideau Canal. The currents and undertows are dangerous here.

Draught
The depth of water required in the channel for boats to navigate.

Ecosystem
An interdependent system of living organisms with their physical and geographical environment.

Exotic Species
A plant or animal species which has been introduced into an area in which it is not normally found. Examples include purple loosestrife and zebra mussels.

Fen
A type of wetland characterized by acidic soils, open water in the middle, surrounded by coniferous trees, and a low productivity level.

Flight of Locks
A series of locks in a row. An excellent example is Ottawa locks where a flight of 8 locks is found. The word flight comes from a flight of stairs.
Forge
A blacksmith's workshop. The forge in the Jones Falls Blacksmith Shop is heated by burning coal. Metal is heated to a very high temperature and then hammered into a particular shape by the blacksmith.

Foundry
A workshop where metal founding is done.

Gate
A door to the lock. Was made of oak from local stands originally but now made of Douglas Fir imported from British Columbia. One railing of a gate weighs approximately 1 ton.

Hydraulics
Refers to the operation of sluice valves and lock gates at 3 stations on the Rideau Canal. The hydraulic systems are powered by electricity.

Indigenous Species
A species, plant or animal, which is native to, or originates in, a specific area. Examples in Eastern Ontario include the Grey Wolf and the Eastern White Pine.

Level (in a lock)
The depth of water in a lock at any given time.

Limestone
A type of rock used in the construction of lock walls. This rock type is sedimentary, consisting mainly of calcium carbonate.

Lockage
The process of moving boats through a lock from one water level to another.

Marsh
A type of wetland in which water is usually a maximum of 2 meters. Offers the best wildlife habitat of all the wetland types. Characterized by reeds, cattails and water lilies.

Mooring
To secure a boat to a fixed object. Mooring for boats is available on the canal for those who wish to spend the night at a lockstation.

Navigable
Water of sufficient depth to allow for boat travel.

Resource
An element having a cultural or natural significance. The Rideau Canal has cultural and natural significance and is therefore protected and preserved for future generations.

Rubble (stone)
Rough fragments of stone. The stone used to build lockmaster's homes is referred to as rubble stone. It is simply rough, fragmented pieces of limestone.

Shoreline Erosion
Wearing away of the shore (land) by water, i.e. waves or precipitation.

Sill
A strip of stone, like a ledge at the base of the lock gates. The sill acts as a stopper for the lock gates when they are closed.

Sluice
A tunnel allowing a flow of water when opened. When opened water can flow into a lock from a higher water level or travel out of the lock to a lower level.
Undertow
Current below the water's surface moving in the opposite direction to the surface current.

Wetland
An area characterized by wet soil and emergent vegetation. Provides important habitat for many animal species and may contain various plant species.
Curriculum Links

GRADES 7 & 8

<table>
<thead>
<tr>
<th>Language</th>
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<tbody>
<tr>
<td><strong>Strand: Reading</strong></td>
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<tr>
<td><strong>Vocabulary Building</strong></td>
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<tr>
<td>Students will</td>
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<tr>
<td>• “use a variety of strategies to determine the meaning of unfamiliar words (e.g. use word-analysis techniques; use knowledge of word origins and derivations; consult dictionaries)”</td>
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<td>• “use the special terminology in a particular area of study, as necessary”</td>
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Dramatic Affairs

**Background**

A valuable asset to the integrated classroom is the opportunity to participate in activities which develop the mind, nurture and reflect our spiritual needs. The arts can help fulfill some of these needs.

Drama is one expression of the ideas, values and concerns of individuals and societies (Common Curriculum, 1995). As a rich piece of Canada’s heritage, the past, present and future of the Rideau Canal can set the stage for a variety of learning experiences in drama.

When planning lessons in drama identify your purpose and aims first. Link the lessons with a theme you are studying in the classroom and have them build up towards something such as a future project. Be flexible in your timing and keep instructions clear, concise and complete. Most of all, make yourself aware of the student’s needs and responses.

**Method**

Students participate in a variety of dramatic activities with themes related to the Rideau Canal. They express ideas, values and concerns through a selection of cooperative games and vignettes.

**Cooperative Games**

**1. Wetland Bingo…**

**Background**

The Rideau Canal system is dotted with wetlands. Several of these wetlands are very significant in their functions and diversity and therefore require special protection. These wetlands are essential to the life of a number of animal species. They provide valuable habitat for fish, animals, and birds, some of which are endangered or extremely rare. Wetlands also function in flood abatement and natural water filtration.

**Materials**

- Bingo cards
- Game card sets

Before playing the game, have the students make the bingo cards and game card sets.
Bingo card:

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Game cards:

Front

B 1

Back

FROG

Card Suggestions:

- wood duck
- bear
- otter
- purple loosestrife
- bull frog
- loon
- sunfish
- snapping turtle
- deer
- whirligig beetle
- beaver
- tree frog
- osprey
- great blue heron
- rabbit
- red winged blackbird
- dragonfly
- cray fish
- salamander
- lily pad
- wolf
- muskrat
- water snake
- mosquito
- painted turtle
- free space
Bingo Card

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<td><strong>Game Cards</strong></td>
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2. Desert...

Background
Two regiments of the Royal Sappers and Miners were ordered by Colonel John By to come from England, and help in the construction of the Rideau Canal. These men were skilled tradesmen, and were to become stone masons or carpenters for the canal's construction. When they arrived however, Colonel By found enough local tradesmen for construction. The Royal Sappers and Miners then filled the role as policemen around the locks, overseeing the work of contractors. When jobs were abandoned by contractors, the Sappers and Miners would complete the jobs.

During construction, and upon completion of the canal, many men deserted the military and did not return to England. They hid from others by turning their bright red uniform coats inside out, thus coining the phrase “turn coat”.

Procedure
This game is best played in an open room or gym where the lights can be turned on and off easily. Students begin up against one wall spread out. Their goal is to reach the other wall or desert without getting caught. They move across when the lights are on, freeze when they are off. Moving after the lights are off disqualifies you or means returning to the beginning again. You have successfully deserted if you reach the other side.

Procedure
Students are paired up and play the game as a team. Each pair gets one BINGO card and one set of game cards. The plants and animals in this game are related somehow to water. Pairs will spread the game cards in front of them with the BINGO numbers facing up.

Partners take turns choosing cards and acting out the animal for the other partner to guess. If the partner guesses correctly, they win that space on the BINGO card. The next partner chooses a card and acts out the plant or animal for the other to guess and so on. The first pair in the class to get BINGO on their card wins.
You can extend the game further and add some cooperation to it by having students pair up. One partner is injured with the use of only one arm and leg. The other partner must help a friend desert without being caught. The deserter may wish to carry or drag the injured partner across the field. Remember when the lights go out, this means freeze.

3. **People Machines…**

**Background**
The construction of the canal was one of the greatest feats of its time, given the conditions under which it was built. Everything was constructed manually, lacking today’s modern conveniences of efficient transportation and electricity.

Yet with the work of hundreds of labourers, the canal was complete in 6 short years. It ran 202 km from Ottawa to Kingston, with some 47 locks built. Blacksmiths, carpenters and stone masons completed the work at the lock sites.

**Procedure**
This cooperative game can apply a technological theme related to the Rideau Canal. Students are placed in groups of 3 or 4. One person spontaneously creates one aspect of a functional machine. Other group members join in to build onto the machine.

**Suggestions:**
- Open and close the gates of the locks.
- Stone masons chiselling away a rock used for the lock walls.
- Paddle a raft down the Rideau.
- A blacksmith working at his forge.
Mini-skits or vignettes are excellent ways of bringing small pieces of history to life. Their production and performance integrates skills in a number of subject areas and can be a powerful learning opportunity for students.

Choose significant pieces of Rideau Canal history for your vignettes. Have groups of students produce and perform them.

Production Ideas:
- Provide students with a particular theme and give them an opportunity to come up with and perform a skit on that subject.
- Have students research a subject of interest to them and produce a skit.
- Consider allowing students to include costumes, props, or sound effects in their skits. This can encourage active participation by the students.
- Video tape the skits and produce a series of “Canal Moments”.

Vignette Ideas and Themes:
- Luxury steamboats were a very big part of the canal in the early 1900’s. The elite travelled on them, ate in luxuriously decorated dining rooms and had private quarters. Round trips cost as little as $5, with meals around 50 cents. Develop a television commercial for one of these luxury steamboats travelling from Kingston to Ottawa on the Rideau Canal.
- Put on a skit about travellers on a steamboat.
- Prepare a ceremony for the opening of the Rideau Canal. Include Colonel John By as the official host of the event.
- Who did more work building the canal: carpenters, stonemasons or blacksmiths? Argue it out.

Please Note: A number of “Ghost Walk” scripts have been provided as ideas for vignettes. As well, a few short stories or tales of the Rideau are also included. Photocopy originals for Rideau Canal Skits and short stories are provided in Resources.

Titles:
Rideau Canal Skits
- Bartering on the Rideau
- A Settling Affair
- The Happy Couple
- A Disagreeable Exchange
- The Farewell
- A Cold Spell

Short Stories
- Oliver’s Ferry
- The Mill
- Foresight
- Lady in Blue
Curriculum Links
(Wetland Bingo)

GRADE 7

<table>
<thead>
<tr>
<th>The Arts</th>
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<tbody>
<tr>
<td><strong>Strand: Drama and Dance</strong></td>
</tr>
<tr>
<td>• “Role playing is a key component of the drama and dance curriculum.”</td>
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<table>
<thead>
<tr>
<th>Science and Technology</th>
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<tbody>
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<td><strong>Strand: Life Systems</strong></td>
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<tr>
<td><strong>Topic: Interactions Within Ecosystems</strong></td>
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<tr>
<td>Understanding Basic Concepts</td>
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<tr>
<td>Students will</td>
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<tr>
<td>• “identify populations of organisms within an ecosystem...”</td>
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Curriculum Links
(Desert...)

GRADE 7

<table>
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<td><strong>Knowledge of Elements</strong></td>
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<th>Health and Physical Education</th>
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<tr>
<td><strong>Strand: Fundamental Movement Skills</strong></td>
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<tr>
<td><strong>Overall Expectations</strong></td>
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<tr>
<td>Students will</td>
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<tr>
<td>• “combine a variety of movement skills (locomotion/travelling, manipulation, and stability) in games...”</td>
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</table>
# Curriculum Links

(People Machines)

## GRADES 7 & 8

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## GRADE 7

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<tr>
<td><strong>Overall Expectations</strong></td>
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<tr>
<td><strong>Students will</strong></td>
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<tr>
<td>• “demonstrate an understanding of the strategies used by early settlers to adapt to the challenges of their new land”</td>
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## GRADE 9 (Open)

<table>
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<tr>
<th>Dramatic Arts</th>
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<tr>
<td><strong>Students will</strong></td>
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<tr>
<td><strong>Communicating and Performing</strong></td>
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<td><strong>Students will</strong></td>
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<tr>
<td>• “perform, in the classroom, a variety of dramatic presentations, using a range of forms”</td>
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</table>
## Curriculum Links

### (Vignettes)

#### GRADE 7

### The Arts

**Strand: Drama and Dance**

**Knowledge of Elements**

Students will

- “demonstrate an understanding of the motives of characters they interpret through drama and dance (e.g. explain the motives and accurately represent the attitudes of a character through voice quality, gestures, body movements)”

- “write in role in various forms (e.g. reports, speeches, interviews), showing their understanding of the complexity of a dramatic situation, and using appropriate vocabulary, tone, and voice for the character portrayed”

**Creative Work**

Students will

- “interpret and present scripts, paying attention to the subtext, characters, and setting”

**Critical Thinking**

Students will

- “research and dramatize material from various sources (e.g. material from autobiographies, history books)”

### History

**Topic: British North America**

**Understanding Concepts**

Students will

- “demonstrate an understanding of life in English Canada (e.g. early pioneer experiences, family life, economic and social life, growth and development of early institutions, transportation, and emergence of towns)”

- “describe the impact of the War of 1812 on the development of Canada (e.g. ..., the Rideau Canal...)”
### GRADE 8

#### The Arts

**Strand: Drama and Dance**

**Knowledge of Elements**

**Students will**

- “demonstrate an understanding of the appropriate use of the voice, gestures, and the level of language in different dramatic situations”

- “write in role in various forms (e.g. monologues, speeches, radio or television broadcasts), showing understanding of the complexity of a dramatic situation and using appropriate vocabulary, tone, and voice for the character portrayed”

**Creative Work**

**Students will**

- “write in role, analysing the subtext of a script and the attitudes and points of view of the characters portrayed”

**Critical Thinking**

**Students will**

- “dramatize material that they have researched from primary sources (e.g. historical documents), and use it effectively in presenting documentary scenes”

### GRADE 9 (Open)

#### Dramatic Arts

**Strand: Creation**

**Overall Expectations**

**Students will**

- “demonstrate acting technique by engaging in a variety of roles”

- “demonstrate an understanding of the process of selecting and organizing dramatic forms and sources to construct a drama to communicate a specific intention”

**Constructing**

**Students will**

- “demonstrate an understanding of group process in negotiating decisions about form and content in the construction of a dramatic presentation (e.g. listening, questioning, consensus seeking)”

**Communicating and Performing**

**Students will**

- “perform, in the classroom, a variety of dramatic presentations, using a range of forms”
The gates of a lock chamber function as doors, letting boats in and out of the lock. Weighing approximately 1 ton per rail, these gates were originally constructed of oak from stands along the Rideau. The depletion of oak stands here in Ontario has forced the importation of Douglas Fir from British Columbia for gate construction today.

A set of gates lasts approximately 12-15 years. Today gates are constructed at the shops in Smiths Falls, taking as long as 2 months to make 1 set of gates (2 doors). Originally they were constructed on site, at the locks, by carpenters and blacksmiths.

Gates are opened and closed using a winch on the side of the wall called a “crab”. The name refers to the animal and its ability to pinch your fingers. These gate crabs have a series of chains attached between them and the gate, which allows the gate to open and close when cranked.

Below are a few activities you can do to learn more about these gates. The activities relate to the evolution of the gate mechanisms and their technology.
a) Chains run down the wall and across the floor of the lock through a series of pulleys.

b) The upper beam or bar of the gate is extended over the wall of the lock. The chains are attached to the end of this swing bar and run through a series of pulleys above the lock wall.

c) A pushbar runs through the base of the “crab” winch and is attached to the upper corner of the gate.

d) Electric pumps power hydraulic rams that pull the gates open and push them closed.

2. Gate design has evolved over the years. Look again at the pictures of gate mechanisms and try to determine which gate may have been the earliest used and which is the most modern. Give each gate mechanism a name and then compare yours with the canal names for each gate mechanism.

Answers:

a) **Endless chain crab system** (1832)
Canal lock gates have been opened and closed using “crab” winches and chains since the canal’s opening in 1832. On the original system, the chain ran down the wall and across the floor of the lock through a series of pulleys. The chain was attached to the lock gate under the water. Unfortunately, debris in the water often caused the chains to jam. Two examples of this system remain in use, one at Kingston Mills and the other at Ottawa Locks.

b) **Swing bar/crab system** (1835)
In 1835, a new operating system was installed at some lock gates to overcome the problem of chains jamming under water. The upper beam or bar of the gate was extended over the wall of the lock. Instead of being attached to the corner of the gate under water, the chain was attached to the end of this swing bar and ran through a series of pulleys above the lock wall. An example of this system is still in use today at the lower gates at Old Slys, Edmonds, Upper Nicholson’s and Old Combined Locks.

c) **Push bar/crab system** (1895)
Late in the nineteenth century, a new operating system was introduced that did not require as large a timber bar for the top of the lock gate. This system uses a push bar which runs through the base of the “crab” winch and is attached to the upper corner of the gate. Chains attached to either end of the push bar are used to open and close the gate. Most canal gates are operated using this system today.

d) **Hydraulic control system** (1966)
In an attempt to modernize the Rideau Canal, the Department of Transport rebuilt Newboro Lock in 1966. Instead of manually cranking “crab” winches, canal staff push a button to activate electric pumps. These, in turn, power hydraulic rams that pull the gate open and push them closed. Only three locks are operated hydraulically on the Rideau Canal. These are at Newboro, Combined and Black Rapids Locks.
Endless chain crab system (1832)

Push bar/crab system (1895)

Swing bar/crab system (1835)

Hydraulic control system (1966)
3. In 1966, the Ministry of Transportation proposed that all canal locks be converted to a hydraulically controlled system. At this time the canal was operated by the Ministry of Transportation. As a result, three lockstations were converted. The first being the Newboro Locks in 1966. In later years, Combined Locks (Smiths Falls) and Black Rapids were converted. Beyond this, no other locks were converted.

The Ministry of Transportation felt that converting the locks to a hydraulic system would improve the efficiency of boat traffic on the canal. However, a number of groups along the corridor felt that we would lose touch with our heritage. Consequently, a major dispute erupted between the two sides. In the end, the canal stayed in its original, manually operated state.

Provided is information regarding the public outcry on the canal’s conversion to an electrically operated system. Listed below are a few activities you could do with the information:

a) Write a letter of protest or support on the issue to the Ministry of Transportation. List reasons why you agree or disagree with the conversion of the canal to an electric system.

b) Set up a debate to take place between opposing sides on the issue. Using the information provided, try to represent the opinions that individuals from opposing sides held. You will need to familiarize yourself thoroughly with this information.

c) Hold a mock-trial in which opposing sides are represented in a court of law. A court appointed judge will have to rule on whether he/she thinks the rest of the canal should be converted to an electrically operated system.

Please Note: An outline for a trial on this issue is provided (see activity “To Convert or Not to Convert”).

You may wish to have a lawyer for the defence (against conversion) and one for the prosecution (for conversion) present in the court room. The defence and prosecution may invite witnesses to help their case. Maybe “ghost appearances” could be made (e.g. Col. John By)?

Perform the mock-trial for another class or your whole school. Share what you have learned about Rideau Canal history with others.

Note: Photocopy originals for the newspaper clippings are provided in Resources.
Newspaper Clipping Titles:
Lock system to be studied before more electrification
Change on the Rideau Canal system
Electric Locking Big Joke
Untitled
Twinning Rideau Locks... May Answer Conflicting Criticism
Electrify Rideau? Definite “No” From Boating Enthusiasts
Rideau Efficiency
Criticism on operation of the Rideau Canal
Save the Rideau
Untitled
Reserved Several Thousand Acres for Public Use
We Support the Rideau’s Modernization
Modernizing the Rideau Canal
Ottawa face-lift: Modernizing canal could spoil tourist attraction

Curriculum Links
NOTE: For Activity 3 c), see curriculum links for “To Convert or Not to Convert,” p. 106.

GRADES 7 & 8
Language

Strand: Writing

Overall Expectations

Students will
• “communicate ideas and information for a variety of purposes (to outline an argument, to compare points of view) and to specific audiences, using forms appropriate to their purpose…”

• “organize information to develop a central idea, using well-linked and well-developed paragraphs” (Grade 7)

• “organize information and ideas creatively as well as logically, using paragraph structures appropriate for their purpose (e.g. paragraphs structured to develop a comparison or establish a cause-and-effect relationship)” (Grade 8)
### GRADES 7 & 8 continued

#### Language

**Strand: Reading**

**Overall Expectations**

Students will

• “decide on a specific purpose for reading, and select the material that they need from a variety of appropriate sources”

**Reasoning and Critical Thinking**

Students will

• “identify the main ideas in information materials, and explain how the details support the main ideas”

• “clarify and develop their own points of view by examining the ideas of others”

• “select appropriate reading strategies (e.g. skim text for specific information...)”

#### Strand: Oral and Visual Communication

**Overall Expectations**

Students will

• “express and respond to a range of ideas and opinions concisely, clearly, and appropriately”

• “contribute and work constructively in groups”

• “demonstrate the ability to concentrate by identifying main points and staying on topic”

### GRADE 8

**Science and Technology**

**Strand: Matter and Materials**

**Topic: Fluids**

**Relating Science and Technology to the World Outside the School**

Students will

• “describe some effects of technological innovations related to hydraulics ... (e.g. getting water from a tap rather than a well results in a reduced need for manual labour)”
<table>
<thead>
<tr>
<th>Grade 9 (Academic) English</th>
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<tbody>
<tr>
<td><strong>Strand: Writing</strong></td>
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<td><strong>Overall Expectations</strong></td>
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<tr>
<td>Students will</td>
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<td>• “use a variety of print and electronic sources to gather information and explore ideas for their written work”</td>
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<tr>
<td>• “identify the literary and information forms suited to various purposes and audiences and use the forms appropriately in their own writing, with an emphasis on supporting opinions or interpretations with specific information”</td>
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<tr>
<td><strong>Generating Ideas and Gathering Information</strong></td>
</tr>
<tr>
<td>Students will</td>
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<tr>
<td>• “locate and summarize information from print and electronic sources...”</td>
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<tr>
<td>• “use the information and ideas generated by research to develop the content of written work”</td>
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<tr>
<td><strong>Organizing Ideas and Information in Written Work</strong></td>
</tr>
<tr>
<td>Students will</td>
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<tr>
<td>• “use a single controlling idea and connecting words to structure a series of paragraphs”</td>
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</tbody>
</table>
# GRADE 9 (Applied)

## English

### Strand: Writing

#### Overall Expectations

**Students will**
- “use print and electronic sources to gather information and explore ideas for their written work”
- “identify the literary and informational forms suited to specific purposes and audiences and use the forms appropriately in their own writing, with an emphasis on communicating information accurately”

#### Generating Ideas and Gathering Information

**Students will**
- “locate and record information and ideas from print and electronic sources, including newspapers...”
- “sort and group information and ideas, assess their relevance and accuracy, and discard irrelevant material”
- “use the information and ideas generated by research to explore topics for written work”

#### Organizing Ideas and Information in Written Work

**Students will**
- “use a single controlling idea to structure a series of paragraphs”
- “present ... reports of investigations in a logical order, using an organizational pattern such as examples, chronological order, or comparison”
Plan a Trip

Method

Students will become familiar with the Rideau Canal and its system of locks through the exploration of recreation on the Canal system. They will plan a boat trip and use math and problem solving skills in the trip budget preparation.

Activity

Materials:
Pamphlets in Resources –
• Historic Canals, Hours of Operation and Fees
• Rideau Canal Pamphlet (map on back side)
• Boating Safely, Rideau Canal

Procedure
Handout the following to the students.

Scenario: At long last, school is finished
for another year. You’re anticipating another long, hot and humid summer. To help ease the summer along a bit, you’ve decided to take a boat trip with three fellow students along the historic Rideau Canal. One problem, you need a boat. You’ve heard about those house boat rental agencies and decided that’s the only way you’re going to be able to do it. Saving the little bit of money you will make this summer pumping gas and scooping ice cream, and splitting the cost four ways, you should be able to swing it.

Your task, along with three fellow students, is to develop a detailed plan of your week long trip on the Rideau Canal. You may start your trip at either end of the Canal (Kingston or Ottawa), but must make it to the other end in 1 week.

**Trip Considerations:**

1. The cost to rent a 27 foot houseboat (sleeps 6) is approximately $980/week.

2. Gas for this boat for a week is roughly $145.

3. There is a fee to go through the locks and dock your boat there for the night (mooring). These can be found in the pamphlet Historic Canals Hours of Operation and Fees in Ontario. Various passes are available depending on the size of your boat and the number of days you will be using the locks, in your case 7 days.

4. You will need to set money aside for food and entertainment.

**Presentation Suggestions:**
- Prepare a diary of events for the week.
- Write an article in a travel magazine.
- Develop a pamphlet put out to attract people to the Canal.
- Present a report on inexpensive and entertaining ways to spend a week on the Rideau Canal.

**Student Guidelines:**
Your efforts will be marked based on the presence of the following information:

1. An introductory paragraph stating the who, what, when, where, and why.

2. A budget stating the cost of boat rental, gas, lockage and mooring fees, food and entertainment for the week. Break this number down to a daily cost of the trip per person and a total cost of the trip per person.

3. The number of locks (not lockstations) you will travel per day. State the distance travelled per day over 7 days.

4. A brief description of some of the historic and natural places to visit along the way. Briefly describe their historic or natural importance and their relation to the Rideau Canal. Include at least 5 sites to visit.
Curriculum Links

GRADES 7 & 8

<table>
<thead>
<tr>
<th>Language</th>
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<tbody>
<tr>
<td><strong>Strand: Writing</strong></td>
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<td><strong>Overall Expectations</strong></td>
</tr>
<tr>
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</tr>
<tr>
<td>• “use writing for various purposes and in a range of contexts”</td>
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<tr>
<td>• “revise and edit their work, focussing on content and elements of style, independently and in collaboration/using feedback from others”</td>
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</table>

| **Strand: Reading** |
| **Overall Expectations** |
| Students will |
| • “decide on a specific purpose for reading, and select the material that they need from a variety of appropriate sources” |

| Reasoning and Critical Thinking |
| Students will |
| • “select appropriate reading strategies (e.g. skim text for specific information)” |

| **Strand: Oral and Visual Communication** |
| **Overall Expectations** |
| Students will |
| • “contribute and work constructively in groups” |
### GRADES 7 & 8 continued

#### History

**All Topics**

**Developing Inquiry/Research and Communication Skills**

**Students will**

- “communicate the results of inquiries for specific purposes and audiences, using ... written notes and reports”

---

#### GRADE 7

**Mathematics**

**Strand: Number Sense and Numeration**

**Computations**

**Students will**

- “perform three-step problem solving that involves whole numbers and decimals related to real-life experiences, using calculators”

---

#### GRADE 8

**Mathematics**

**Strand: Number Sense and Numeration**

**Computations**

**Students will**

- “perform multi-step calculations involving whole numbers and decimals in real-life situations, using calculators”
<table>
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<tr>
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<td><strong>Overall Expectations</strong></td>
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<tr>
<td>• “use a variety of organizational techniques to present ideas and supporting details logically and coherently in written work”</td>
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</table>

| **Generating Ideas and Gathering Information** |
| Students will |
| • “locate and summarize information from print and electronic resources” |
| • “group and label information and ideas” |

| **Strand: Language** |
| **Developing Listening and Speaking Skills** |
| Students will |
| • “communicate orally in group discussions for different purposes, with a focus on identifying key ideas and supporting details” |
| • “communicate in group discussion by sharing the duties of the group, speaking in turn, listening actively, taking notes, paraphrasing key points made by others, exchanging and challenging ideas and information, asking appropriate questions, reconsidering their own ideas and opinions, managing conflict, and respecting the opinions of others” |
### GRADE 9 (Applied)

#### English

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#### Generating Ideas and Gathering Information

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#### Organizing Ideas and Information in Written Work

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### Strand: Language

#### Developing Listening and Speaking Skills

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<td></td>
</tr>
</tbody>
</table>
Introduction

Water is a limited resource which must be used in a kind and careful manner. It is to be highly valued and respected as it is essential to life. Water quality and quantity can have a major effect on people, animals, and plants. Conservation of water is one important habit people can adopt in order to sustain the quantity of water.

The Rideau Canal is responsible for maintaining a careful and efficient balance of its water supply. Water management has been an essential part of canal operation since its completion in 1832. Many different demands are placed on the Rideau Canal corridor which include use for recreation, navigation, natural resource management, flood abatement, water supply, and electricity generation.

The Rideau Canal is part of two watersheds: the Rideau River and the Cataraqui River. A system of reservoir lakes supplies water to the canal, and are “drawn down” when necessary. Water levels on the canal must be regulated in order to ensure it can function at full capacity. It is not always possible to meet all the diverse needs for this limited resource, especially during dry periods.

We all have a variety of choices in how we treat and use water. If we use it wisely, and without waste, then it can continue to remain a sustainable resource. It is important for students to realize that water is a limited resource and that they can contribute to the conservation of water in their daily lives.

References

Rideau Canal
Rideau Canal Management Plan
Parks Canada

Billington, Charles
Our River, the Rideau
Rideau Valley Conservation Authority, 1992
Water’s Going On?!…

Background

Every molecule of water that was present when the earth’s oceans were formed is still present today in one of water’s three forms – as a gas, a liquid or solid ice. Water molecules move at varying speeds through the water cycle; water in its gaseous form may remain in the atmosphere for about nine days, but it may stay frozen in the Antarctic ice cap for up to 10,000 years.

Most of the fresh water in the world is frozen in these polar ice caps. The largest part of what remains is groundwater—underground water that moves between layers beneath the earth’s surface.

In North America, some water used is drawn from groundwater sources. Much of the groundwater used will not be returned to the groundwater system in the near future. Shallow groundwater may have a renewal rate of about 300 years, and deep groundwater (over 1,000 metres deep) may renew itself in about 4,600 years.

This causes an ever-increasing drain on the groundwater supply. As groundwater dries up, stream flows are reduced. Ponds and marshes dry up and plant species die out. The groundwater remaining may also become contaminated by saltwater intrusion or by pollution, rendering it unfit to drink. All these results have obvious effects on wildlife, people, and the environment. A 1980 report stated the groundwater depletion and contamination will be one of the major environmental problems of the 1980’s.

Most of the world’s fresh water is used for irrigation, but if a majority of people practised personal water conservation and water quality practices, it would make a real difference.

The major purpose of this activity is for students to become aware of the amount of water they use and waste each day at school and to make recommendations for ways to conserve the water, both at school and at home.

Method

Students estimate and calculate water use in school and then design and try ways to conserve water. Students record and interpret how much water they use in a day at school and make recommendations as to how they can save a significant percentage of the water.

Materials:
- containers of different volumes
- chalkboard
- paper
- pencils
Procedure

1. Ask the students to estimate how much water each student uses each day in school. Have containers of different volumes for students to use for reference. Write their estimates on the chalkboard or on a chart. A chart may be made showing the class’s estimate as follows:

<table>
<thead>
<tr>
<th>litres</th>
<th>8</th>
<th>16</th>
<th>24</th>
<th>32</th>
<th>40</th>
<th>48</th>
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<tr>
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<td>x</td>
<td>xxx</td>
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</tbody>
</table>

2. Ask the students to monitor their use of water for a day. They can time their drinks of water and record them in a notebook. Ask them to do the same for hand-washing. They should also record the number of times they use the restroom, sink, etc.

3. As a class, calculate the amount of water used; e.g., run water from the fountain to a container for ten seconds and see how much water was used. Use this amount to calculate the amount per drink that the students have recorded in seconds. Do the same for the sink faucets. Multiply the number of litres used per flush by the number of trips to the restroom. Have each student come up with an individual number of litres used.

4. Compare the estimates of water used to the actual water used.

5. Add all the individual litres of water used to arrive at a total for the entire class. Divide this amount by the number of students in the class. In this way, individual students can compare their individual usage against a class average in their water use.

6. Ask the students if it would be possible to reduce the amount of water used, and if so, how. For example, cups could be used at the drinking fountain to reduce the amount of water that goes down the drain.

7. Put the students’ suggestions into practice for a day or two. Then ask the students how water conservation practices changed what they did. What materials did they use or buy? Did their attitude change? How? Which changes in their behaviour will they keep, as a part of their personal lifestyles?

Extensions

1. Where does our water come from? How does it get here? Does our finding, transporting, and using water affect wildlife in any way? If so, how? After a discussion of the effects of water depletion and conservation on wildlife, ask students to draw two murals— one showing the effects of depletion and another the effects of conservation.

2. Monitor water use at home (showers, dishes, clothes-washing, lawn-watering, etc.)

3. Use this activity for paper and energy use and conservation.

4. Incorporate use of elementary statistics in this activity!
## Curriculum Links

### GRADE 7

### Mathematics

<table>
<thead>
<tr>
<th>Strand: Measurement</th>
<th>Overall Expectations</th>
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<tbody>
<tr>
<td>Students will</td>
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</table>

### Strand: Data Management and Probability

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<tbody>
<tr>
<td>Students will</td>
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<tr>
<td>“systematically collect, organize, and analyse data”</td>
</tr>
<tr>
<td>“develop an appreciation for statistical methods as powerful means of decision making”</td>
</tr>
<tr>
<td>“evaluate data and make conclusions from the analysis of data”</td>
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</table>

**Collecting and Organizing Data**

<table>
<thead>
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<th>Students will</th>
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<tr>
<td>“collect and organize data on tally charts ... using simple data collected by students”</td>
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### Science and Technology

### Strand: Life Systems

<table>
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<tr>
<th>Topic: Interactions Within Ecosystems</th>
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<tr>
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<td>“demonstrate an understanding of the effects of human activities ... on the sustainability of ecosystems”</td>
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</table>
### GRADE 7 continued

#### Science and Technology

**Strand: Life Systems**

**Developing Skills of Inquiry, Design, and Communication**

**Students will**
- “compile qualitative and quantitative data gathered through investigation in order to record and present results”

**Relating Science and Technology to the World Outside the School**

**Students will**
- “investigate the impact of the use of technology on the environment (e.g. redirection of water flow for human needs)”

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#### Geography

**Topic: The Themes of Geographic Inquiry**

**Developing Inquiry/Research and Communication Skills**

**Students will**
- “analyse, synthesize, and evaluate data by applying a decision-making model to an environmental issue”

**Topic: Natural Resources**

**Overall Expectations**

**Students will**
- “demonstrate an understanding of how human activity affects people and the environment”

**Understanding Concepts**

**Students will**
- “demonstrate an understanding that people use renewable, non-renewable, and flow resources in a variety of ways to meet their needs”
- “demonstrate an understanding of the concept of sustainable development and its implications for the environment”
### GRADE 8

#### Mathematics

**Strand: Measurement**

**Overall Expectations**

Students will

- “demonstrate a verbal and written understanding of and ability to apply accurate measurement and estimation strategies that relate to their environment”

#### Strand: Data Management and Probability

**Overall Expectations**

Students will

- “systematically collect, organize, and analyse primary data”

- “evaluate data and draw conclusions from the analysis of data”

#### Science and Technology

**Strand: Earth and Space Systems**

**Topic: Water Systems**

**Overall Expectations**

Students will

- “examine how humans use resources from the earth’s different water systems and identify the factors involved in managing these resources for sustainability”

**Developing Skills of Inquiry, Design, and Communication**

Students will

- “compile qualitative and quantitative data gathered through investigation in order to record and present results”

**Relating Science and Technology to the World Outside the School**

Students will

- “evaluate human use of water and the economic and environmental effects of that use”
### GRADE 9 (Academic)

**Canadian and World Studies -- Geography of Canada**

**Strand: Human-Environment Interactions**

**Overall Expectations**

**Students will**

- “demonstrate an understanding of the challenges associated with achieving resource sustainability, and explain the implications of not meeting those challenges for future resource use in Canada”

**Understanding Concepts**

**Students will**

- “demonstrate an understanding of how human activities affect the environment”

**Developing and Practising Skills**

**Students will**

- “research and report on ways of improving the balance between human needs and natural systems”

---

### GRADE 9 (Applied)

**Canadian and World Studies -- Geography of Canada**

**Strand: Human-Environment Interactions**

**Overall Expectations**

**Students will**

- “analyse ways in which Canadians use resources in Canada”

- “demonstrate an understanding of the challenges associated with achieving resource sustainability and explain the implications of meeting or not meeting those challenges for future resource use in Canada”

**Understanding Concepts**

**Students will**

- “demonstrate an understanding of how human activities affect the environment”
## GRADE 9 (Applied) continued

### Canadian and World Studies -- Geography of Canada

#### Strand: Human-Environment Interactions

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<th>Learning Through Application</th>
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<tr>
<td><strong>Students will</strong></td>
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<tr>
<td>• “create and implement a plan to address a local environmental concern”</td>
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</table>
Wetland Metaphors

Introduction

Wetlands are often a misunderstood and unappreciated part of the environment. Many people are unaware that wetlands represent some of the most diverse and significant ecological habitats in the natural world. These important resources also provide a wide range of benefits for both the environment and society.

Wetlands are defined as lands that are permanently or periodically covered by water up to two metres in depth. These areas are characterized by fluctuating water levels, and dominance by plants and animals that are adapted to living in wet conditions.

There are several important roles that wetlands represent for both the environment and society. They are effective filtering systems in purifying water, and they control erosion of shorelines. These areas serve as watersheds for flood control by absorbing excess water, and they retain moisture during dry periods. Wetlands also provide rich habitats for many fish and wildlife populations, and are beneficial resources for recreation and education purposes. They represent advantages to local economy by providing opportunities for fishing, trapping and hunting, and for nature appreciation.

The Rideau Canal has numerous wetlands, which take up 16% of its shoreline. Thirteen wetlands along the corridor are provincially significant, which represent 11% of all provincially significant wetlands in Eastern Ontario. These areas represent an important resource to the Rideau Canal corridor.

There are three major wetland areas in the Rideau corridor: the Cataraqui Marsh, the Swale (Smiths Falls area), and the Tay Marsh. Each one of these wetlands are unique and support differing populations and species of wildlife and plants. The marshes provide prime habitat for species like the bullfrog, muskrat, and snapping turtles. Wild rice, Canada’s only native cereal, is quite abundant in some parts.

Wetlands are one of the canal corridor’s most important, but threatened natural resources. Destruction of wetlands along the Rideau has reached critical levels in some areas due to dredge and fill operations, with depletion leading directly to loss of fish and wildlife habitat. They have a necessary role in healthy watershed management and wildlife conservation, which must be recognized.

It is essential that wetlands are preserved and conserved for our future generations. Further loss of wetlands will result in the decline of ecological diversity, water quality, and recreational and educational value. If the canal wetlands are to survive
in the long run, the support and cooperation of our local community is vital.

The following activity will give students the opportunity to gain knowledge of the many qualities of wetlands, and demonstrate the understanding that they are significant to both wildlife and people. Using metaphors, students will make the links between the natural functions and characteristics of wetlands to everyday life.

Note: A Rideau Canal Wetlands Map is provided in Resources.

References

Biosystems Environmental Consultants
A Study of Wetlands Between Poonamalie and Smiths Falls Lockstations
Parks Canada, 1979

Coltas, Michael and Droughn Zavitski
Secondary Wetlands of the Rideau Waterway: Burritt’s Rapids to Newboro
Parks Canada, 1983

Joynt, Cara
Learning About Wetlands... An Awareness Approach
Smiths Falls, Rideau Environmental Action League, 1993

Rideau Canal
Rideau Canal Management Plan
Parks Canada, 1994
Wetlands are many different things to many different people. Some people have never heard or thought about wetlands. Others are working actively to protect wetlands because of their importance.

Wetlands are simply any land areas that tend to be regularly wet or flooded and shallow water areas along freshwater ocean shores. They include areas like freshwater and saltwater marshes, wet meadows, swamps, lagoons, bogs and prairie potholes. Wetlands occupy 14% of Canada, about 127.2 million hectares. All wetlands, whether coastal or inland, provide special habitats that serve areas far beyond their boundaries. Wetlands are uniquely important to plants, animals, humans and the total environment.

Because of the abundance of food, vegetative cover (shelter), and water found there, many wetlands are rich with diverse wildlife species. Coastal, estuarine and inland marshes, for example, provide breeding, resting and wintering habitats for thousands of migratory birds, including more than 100 species of ducks, geese, swans, cranes, gulls, herons, bitterns and sandpipers, and other shore birds. Kingfishers, owls, ospreys and other predators also feed in wetlands. Many species of fish that are important for commercial and recreational use by humans reproduce and spend part, or all, of their lifecycle in fertile wetlands adjacent to larger, more open bodies of water. These fish species include bass, salmon, smelt, capelin, eel, carp, walleye, perch and pickerel.

A wide variety of reptiles, amphibians, insects and crustaceans also breed and live in wetlands. Frogs and toads, turtles, salamanders, snakes, dragon-flies, oysters, water striders, clams, and crayfish flourish in wetland habitats. Many mammals – from muskrats and beaver to whitetail deer and moose – also depend on wetland areas. Wetlands are often referred to as “nurseries” because they provide critical breeding and rearing habitats for countless numbers and kinds of wildlife.

Wetlands also have the unique ability to purify the environment. They act as natural filtering systems and have been shown to be extremely effective; for example, some kind of wetlands can trap and neutralize sewage waste, others especially along shorelines allow silt to settle and promote the decomposition of many toxic substances.

The importance of vegetation associated with wetlands cannot be overlooked. Plants absorb nutrients and help cycle them through food webs. Plants also keep nutrient concentrations from reaching toxic levels. Plants slow down water flow, causing silt to settle out. Through photosynthesis, plants add oxygen to the system and provide food to other life forms.

Of great importance to humans are the flood control characteristics of wetlands. When runoff from rains and spring thaws is high, wetland areas absorb excess water until it gradually drains away down
Many of the major attributes of wetlands can be explored through the use of metaphors. To use a metaphor is to apply a word or phrase to an object or concept which it does not literally denote, in order to suggest a comparison between the two. A metaphor represents a concept or idea through another concept or idea. “A tree is a home” and “Books are windows of thought” are two examples. In this activity a variety of everyday objects are used to represent the natural functions of wetlands. For example:

<table>
<thead>
<tr>
<th>Object</th>
<th>Metaphoric Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>sponge</td>
<td>absorbs excess water caused by runoff; retains moisture for a time even if standing water dries up eg., sponge placed in a small puddle of water absorbs water until saturated, then stays wet after standing water has evaporated)</td>
</tr>
<tr>
<td>pillow or bed</td>
<td>is a resting place for migratory birds</td>
</tr>
<tr>
<td>mixer or egg beater</td>
<td>mixes nutrients and oxygen into the water</td>
</tr>
<tr>
<td>cradle</td>
<td>provides a nursery that shelters, protects and feeds young wildlife</td>
</tr>
<tr>
<td>sieve or strainer</td>
<td>strains silt, debris, etc., from water</td>
</tr>
<tr>
<td>filter</td>
<td>filters smaller impurities from water</td>
</tr>
<tr>
<td>antacid</td>
<td>neutralizes toxic substances</td>
</tr>
<tr>
<td>cereal</td>
<td>provides nutrient-rich foods</td>
</tr>
<tr>
<td>soap</td>
<td>helps cleanse the environment, as wetlands do</td>
</tr>
</tbody>
</table>
Wetland habitats are being converted to other uses (for roadways, industrial and housing developments, and especially for agricultural purposes) or otherwise being degraded (drained for pest control or polluted with chemicals or siltation).

Environment Canada estimates that half of wetlands of southern Canada have been lost. Since the days of earliest settlement, more than 65% of Maritime salt marshes, 68% of southern Ontario and St. Lawrence Valley wetlands, up to 71% of Prairie potholes and sloughs, and 70% of Pacific estuary wetlands have been converted to other uses, mainly for agriculture and urban and industrial expansion (Environment Canada, 1986).

Although some wetlands are protected by federal, provincial and territorial regulations, there still is a significant need to create a greater understanding of the importance of wetlands as ecosystems and as wildlife habitat and of economic values of wetlands in their natural state.

The major purpose of this activity is for students to develop an appreciation and understanding of wetlands through the power of metaphor, linking the characteristics and natural functions of wetlands to the familiar realm of everyday life.

**Method**

Students are presented with a selection of “hands on” objects for investigation as metaphors for natural functions of wetlands.

Students describe the characteristics of wetlands; and demonstrate their understanding of the importance of wetlands to wildlife and humans.

**Materials**

- a large pillowcase, bag or box
- sponge
- small pillow
- soap
- eggbeater or mixer
- small doll cradle
- sieve or strainer
- paper (coffee) filter
- antacid tablets
- small box of cereal
- 7.5 cm x 12.5 cm cards with pictures that could be used to show other wetland metaphors:

  - eg. a zoo could represent the idea of wildlife diversity in a wetland; a lush vegetable garden could represent the idea of a productive wetland in which food is abundant; a vacation resort could represent the idea of a resting or wintering place for migrating waterfowl.

**Note:** A metaphoric approach such as this allows a variety of objects to suggest some appropriate linkage to the basic characteristics of wetlands.
**Procedure**

1. Prepare a “Mystery Metaphor Container” (pillowcase, bag or box). It should be possible for a student to put his or her hand into the container and pull out an object. You may want to collect as many as one metaphoric object per student, but at least have enough for one per group of four students. Put the container aside to use later.

2. Discuss the variety of wetlands found in your local area, province, country, etc... Then invite the students to sit quietly and close their eyes. Ask them to imagine and visualize a wetland. Have them examine what it looks like. Have them look carefully at the plants and animals, including insects and small creatures. What does the air feel like? How does it smell?

**Optional:** Play a tape recording of natural sounds from wetlands. Some are available commercially in record and nature stores.

3. Invite the students to tell what they imagined. Compile a list of their offerings. Encourage discussion and mutual sharing.

4. With their lists as a point of reference, help the students identify which plants and animals are actually most likely to be found in a wetland. If possible, have them classify the plants and animals according to the kind of wetland in which they would be found. Provincial, territorial or federal wildlife officials and representatives of private conservation or nature-related organizations can be helpful.

The Golden nature guides series from Western Publishing Company, Inc., is also useful. Information about wetlands can be obtained from provincial and territorial wildlife government agencies, Ducks Unlimited Canada, the Canadian Wildlife Service (Environment Canada), and Wildlife Habitat Canada. *Wetlands in Canada: A Valuable Resource* from Environment Canada includes a variety of useful information.

5. Next provide the students with background information to serve as an overview of the basic ecological activities that characterize the wetland habitat. For example, you can include the following:

- **Sponge effect** - absorbs runoff
- **Filter effect** - takes out silt, toxins, wastes, etc.
- **Nutrient control** - absorbs nutrients from fertilizers and other sources that may cause contamination downstream
- **Natural nursery** - provides protection and nourishment for newborn wildlife
- etc.

Suggest that these activities and many more that they could probably think of are taking place in wetlands all the time.

6. Now bring out the “Mystery Metaphor Container”. Tell the students that everything in the container has something to do with a wetland. Have the students divide into groups of four. Announce that when it is their turn, you want a representative of each group to draw an object from the container. Then, as a group, they must figure out how the object could represent what a wetland is or does.
7. Have the designated student reach into the container and withdraw one object. When each group has an object, ask them to work as a team to describe the relationships between their metaphoric object and the wetland. Encourage the students to build on each other’s ideas. You can also assist by strengthening their connections.

**Note:** Allow the students time to discuss their ideas with each other before doing so in front of the entire class.

8. Ask each group to report their ideas to the class.

9. Following discussion and review of the functions represented by each metaphor, ask the students to summarize the major roles that wetlands perform in contributing to habitat for wildlife. List the ways in which wetlands are important to humans. Why do humans convert wetlands to other uses? Ask them if their own attitudes about wetlands are different now. If yes, how? If not, why not?

10. For the final part of this activity, encourage the students’ understanding of how the wetlands’ condition depends upon each of us. Many kinds of wildlife depend upon wetlands. Our own well-being requires wetland ecosystems. Strengthen the students’ understanding of the connectedness that humans have to wetlands. Recreation, aesthetics, economic and utilitarian uses, environmental quality, and nature study are but a few of the connections we each have with wetlands.

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**Extensions**

1. Personally visit a wetland to verify the appropriateness of the metaphors explored in the classroom. Identify and discuss any limitations to the appropriateness of these metaphors. Identify what seem to be the most compelling attributes of the metaphors in helping you understand the characteristics and nature of the wetland. Expand on your understanding of these metaphors. Identify new and appropriate metaphors!

2. Investigate local, provincial, territorial and federal regulations and laws that govern uses of wetlands.
## Curriculum Links

### GRADE 7

**Science and Technology**

**Strand: Life Systems**

**Topic: Interactions Within Ecosystems**

**Overall Expectations**

**Students will**

- “learn that ecosystems consist of communities of plants and animals that are dependent on each other as well as on the non-living parts of the environment”

- “demonstrate an understanding of the effects of human activity ... on the sustainability of ecosystems”

### Relating Science and Technology to the World Outside the School

**Students will**

- “explain the long-term effects of the loss of natural habitats”

**Language**

**Strand: Oral and Visual Communication**

**Overall Expectations**

**Students will**

- “contribute and work constructively in groups”

**Use of Words and Oral Language Structures**

**Students will**

- “use analogies and comparisons to develop and clarify ideas”
## Canadian and World Studies -- Geography of Canada

### Strand: Human-Environment Interactions

#### Understanding Concepts

**Students will**
- “demonstrate an understanding of how human activities (e.g. agricultural and urban development...) affect the environment”

## English

### Strand: Language

#### Developing Listening and Speaking Skills

**Students will**
- “communicate in group discussion by sharing the duties of the group, speaking in turn, listening actively, taking notes, paraphrasing key points made by others, exchanging and challenging ideas and information, asking appropriate questions, reconsidering their own ideas and opinions, managing conflict, and respecting the opinions of others”

- “plan and make oral presentations to small groups or the class”
### GRADE 9 (Applied)

#### Canadian and World Studies -- Geography of Canada

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<tr>
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<td><strong>Overall Expectations</strong></td>
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<tr>
<td>Students will</td>
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<tr>
<td>- “demonstrate an understanding of the interdependence of natural and human systems in Canada’s rural and urban landscapes”</td>
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It is essential that wetlands are preserved and conserved for our future generations. Further loss of wetlands will result in the decline of ecological diversity, water quality, and recreational and educational value. If the canal wetlands are to survive
the support and cooperation of our local community is vital.

The following activity will enable students to consider various land use options for wetland habitats and evaluate the possible outcomes. Through participation in this activity, they can develop an appreciation and understanding of wetlands, and discuss ways in which we all can modify our life choices to reduce the harmful effects on wetlands.

References

Biosystems Environmental Consultants
A Study of Wetlands Between
Poonamalie and Smiths Falls
Lockstations
Parks Canada, 1979

Coltas, Michael and Droughn Zavitski
Secondary Wetlands of the Rideau
Waterway: Burritt’s Rapids to
Newboro
Parks Canada, 1983

Joynt, Cara
Learning About Wetlands...
An Awareness Approach
Smiths Falls, Rideau Environmental
Action League, 1993

Rideau Canal
Rideau Canal Management Plan
Parks Canada, 1994

Please Note: A Rideau Canal Wetlands Map is provided in Resources.
Background

Every human use of land affects wildlife habitat, positively or negatively. What humans do with land is a reflection of human priorities and lifestyles. The search for a modern-day “good life” and all of its conveniences produces mixed results for wildlife and the natural environment. Sometimes people see undeveloped areas of natural environment as little more than raw material for human use. Others believe that the natural environment is to be preserved without regard for human needs. Still others yearn for a balance between economic growth and a healthy and vigorous natural environment. Very real differences of opinion regarding balance exist between well-meaning people.

At the core of land-use issues is the concept of growth. Growth in natural systems has inherent limits, imposed by a dynamic balance of energy between all parts of the system. Energy in natural systems is translated into food, water, shelter, space, and continued survival. This means that the vitality of natural systems is expressed by their ability to be self-regulating. This capacity for self-regulation makes it possible for all natural members of an ecosystem to live in harmony.

All the life forms of any ecosystem must be considered. The microbes in the soil are just as necessary to a habitat as the plants and predators. It is this natural dynamic balance, with all its inherent and essential parts, that much of human land use has tended to disturb. Human activities can often go beyond the natural limits of a setting. Humans have the ability to import energy sources that allow a system to exceed its natural limits- or to remove energy sources that are necessary for a system to stay in balance. For example, people can build dams to create power, water can be captured for irrigation, wetlands can be drained for homes and buildings. All of these activities affect wildlife habitat.

Wetlands, for example, are often seen as swampy wastelands, yet they are the nursery for hundreds of forms of wildlife. Fish, frogs, toads, migrating birds, snakes, insects, and a remarkable variety of plants all make a home of wetlands. Wetlands are highly vulnerable to development, pollution and a variety of forms of human interference with the natural flow of water. Hundreds of thousands of hectares of valuable wetlands are lost each year- for example, to draining, dredging, filling, and pollution.

Fourteen per cent of Canada is covered by wetlands. More than half of the wetlands of the southern parts of Canada have been lost. The wetlands of the western part of Canada were once considered the richest of the world. The prairies potholes, most remarkable wetlands, are being drained, and large areas have been lost. These are critical reproduction areas for 70% of the ducks of North America. Millions of hectares have been drained and put to plough- not only destroying the habitat of ducks and other wildlife, but frequently also lowering the water table, making that water less available for human use.
Given the extensive impacts humans have already had and continue to have on the land, a major challenge now facing humans is how to have a more responsible impact. How can we develop the awareness, knowledge, skills, and commitment that are necessary in order for humans to take responsible actions affecting the remaining areas of natural wildlife habitat? How can we develop the necessary understanding to restore a more natural dynamic balance in places where human disturbance has existed for centuries?

The major purpose of this activity is to encourage students to wrestle with these concerns. In this simulation, students use the “Dragonfly Pond” as a microcosm of environmental concerns involved in management decisions. They struggle with the arrangement of overlapping and conflicting land uses in an effort to preserve a wetlands habitat. When the students reach some kind of agreement about the local issues, the activity shifts to how what they have done affects other dragonfly ponds downstream. The activity ends with consideration of the idea that the planet is, in fact, a single “Dragonfly Pond”.

Method

Students create a collage of human land-use activities around an image of pond. Students evaluate the effects of different kinds of land use on wetland habitats and discuss and evaluate lifestyle changes to minimize damaging effects on wetlands.

Materials:
For each 3 students:
- scissors
- masking tape
- paste or glue
- paper
- one set of land-use cut-outs
- one Dragonfly Pond cut-out
- a large piece of paper (45cm x 60cm)
upon which to fasten the cut-outs
Dragonfly Pond
**Procedure**

1. Prepare copies of the two cut-out sheets ahead of time. Explain the activity. Tell the students that they will be responsible for arranging the pattern of land use around the Dragonfly Pond in such a way as to do the best they can to preserve the health of this beautiful aquatic area.

2. Divide the class into groups of three to five, with each group representing one of the interest groups. Students will stay in these groups until the end of the activity. Possible interest groups are:

   - residents – want to live in the area
   - farmers – want to use the land to raise food and livestock
   - business interests – want to use the land for commerce and economic growth
   - gas station owners – want to make a living in servicing and repairing cars
   - parks department personnel – want people to have a place for recreation
   - highway department personnel – want to maintain access in the area
   - bleach factory representatives – want to preserve jobs and commerce.
   - **Note:** Add others that you think may be locally important.

3. Pass out the land-use materials. Pass out the large paper that will serve as the base for each group’s pond and its associated land-use activities. Have the students cut out the land-use pieces and the Dragonfly Pond. Tell them that all the land use cut-outs must be used; they can be cut smaller than they are; but all the parts must be used. They may touch, but they cannot overlap. The students may also create additional land uses of their choosing. When they fasten the cut-outs to their large base sheet, suggest that they use small loops of tape. This will allow them to change their minds before they paste them down.

4. Once the students have cut out the necessary materials and are ready to begin the process of making land-use decisions, have them first create a list of pros and cons for each land use. Guide the class discussion so that they consider the consequences of each land use. Record these on the chalkboard. The following are only a few of the many possible examples:

---

**Farms:**

*PRO*
- produce food
- economic value
- provide jobs through seasonal employment

*CON*
- use pesticides (herbicides, insecticides) that may damage people and environment
- source of natural soil erosion
- sometimes drain wetlands for farm lands
- use chemical fertilizers that may damage water supplies

---
Businesses:

**PRO**
- produce employment
- provide commerce
- create economic stability

**CON**
- produce wastes and sewage
- may contaminate water (detergents, pesticides)
- use chemical fertilizers (lawns, etc.)

Homes:

**PRO**
- provide a sense of place
- develop a sense of community

**CON**
- generate wastes and sewage
- use water
- contribute to loss of wildlife habitat

5. Have the students work in their teams for a long enough period of time to begin to seriously grapple with the challenge.

6. Invite each group to volunteer to display and describe their work in progress. Encourage discussion of their choices. In the discussions emphasize that:
   - no land use can be excluded
   - wildlife habitat must be preserved
   - everyone must agree.

Look for the consequences of their proposed land-use plan. Be firm about the issues, but fair about this being a very difficult set of choices. Ask additional groups to volunteer to show their work in progress, and discuss theirs similarly.

7. Continue the discussion by asking more students to share their proposed plans. Again, be firm in discussing the consequences. Point out that shutting down the factory and businesses will be likely to destroy the economic base of Dragonfly Town. Abandoning the farm affects food supplies and some wildlife. However, if wetlands are drained to create farm land, that results in a loss of habitat for some wildlife as well as a loss of other important values of wetlands.

8. Give the students additional time working in their groups to come up with what they believe to be the best possible land-use plan, under the circumstances. Being sensitive to their frustrations, display all the final land-use plans above a chalkboard for all to see and discuss. Analyse and discuss the merits of each of the approaches. Point out that although their solutions may not be perfect, they can minimize the damage to Dragonfly Pond.

9. Choose one of the students’ images above the chalkboard. Next, on the chalkboard, continue Dragonfly Creek downstream. Many students tend to dump effluent below Dragonfly Pond and let it flow downstream. Show the route the stream might travel. On the chalkboard drawing, have the downstream part of Dragonfly Creek become another pond and wetland, and label the new one Laughing...
10. Ask the students to brainstorm possible problems that could be faced within each of these aquatic systems as a result of the human activities at Dragonfly Pond. Make inferences and predictions about the potential consequences of these activities. For example, you could emphasize the effluent from the bleach factory. How will it be treated? Where? By whom? Where will it go? With what effects?

11. Ask the students to look again at all of the land uses in this activity. If they had been considering any of them as inherently bad, have them consider a different question. What could the people who are actually in charge of these various land uses do in their practices to minimize the damage to Dragonfly Pond? Have the activity end with an emphasis on solutions rather than on problems. Point out, for example, the revolution taking place in the "mining" of industrial effluents through "scrubbers" to extract wastes as profitable resources. (Perhaps the students need to make a "scrubber filter" for the bleach factory.) Agricultural practices are changing so as to reduce the use of potentially lethal agents. Petroleum wastes are being recycled, and domestic awareness regarding uses of pesticides and detergents is evolving.

12. Ask the students to create a list of things they think personally can do to begin to reduce the potentially damaging effects of their own lifestyles on the "downstream" habitats they may never have thought about. If possible, invite them to periodically, throughout the school year, report on their progress in carrying out these new practices. Consider with them in discussion the idea that all the waters of the planet are, in fact, part of a single "Dragonfly Pond".

Extensions

1. Set up an action team to locate a dragonfly pond in your community. Determine the overall quality of the wetlands with which it is connected.

2. Trace any stream or river system that passes through your community from its source to its final entrance into the sea. List all the sites that you can identify that lower the quality of the waters in their journey and suggest how to reverse the process.

3. Collect newspaper articles for local water-related and land-use issues as a current events activity.
4. Learn more about environmental impact statements. Try to obtain actual copies of statements about wetlands in your area. See what concerns are addressed in these documents.

5. Learn about the provincial, territorial and national parks system, wilderness preserves, game sanctuaries, and migratory bird sanctuaries. Are there any parks or migratory bird sanctuaries in your area? What animals find refuge in them? Visit a park or a migratory bird sanctuary.

6. Find out about private organizations that work to protect wetlands. Three examples are: Ducks Unlimited Canada, the Nature Conservancy of Canada, and Wildlife Habitat Canada. Find out about what they do and how they do it.

7. Find out about zoning laws and land-use regulations in your area. Would the plan your group proposed for Dragonfly Pond be allowed in your community?
## Curriculum Links

**GRADE 7**

### Science and Technology

#### Strand: Life Systems

#### Topic: Interactions Within Ecosystems

<table>
<thead>
<tr>
<th>Overall Expectations</th>
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</thead>
<tbody>
<tr>
<td>Students will</td>
</tr>
<tr>
<td>• “demonstrate an understanding of the effects of human activities ... on the sustainability of ecosystems”</td>
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</table>

#### Developing Skills of Inquiry, Design, and Communication

<table>
<thead>
<tr>
<th>Students will</th>
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<tbody>
<tr>
<td>• “communicate the procedures and results of investigations for specific purposes and to specific audiences, using ... oral presentations ... and drawings”</td>
</tr>
</tbody>
</table>

#### Relating Science and Technology to the World Outside the School

<table>
<thead>
<tr>
<th>Students will</th>
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</thead>
<tbody>
<tr>
<td>• “identify and explain economic, environmental and social factors that should be considered in the management and preservation of habitats”</td>
</tr>
</tbody>
</table>

### Geography

#### Topic: The Themes of Geographic Inquiry

#### Understanding Concepts

<table>
<thead>
<tr>
<th>Students will</th>
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</thead>
<tbody>
<tr>
<td>• “demonstrate an understanding of the environment theme (e.g. in the system of non-living and living elements, people are part of the living elements)”</td>
</tr>
<tr>
<td>• “demonstrate an understanding of the interaction theme (e.g. the environment provides opportunities and challenges; people change the environment as they use it)”</td>
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</tbody>
</table>

#### Applying Concepts and Skills in Various Contexts

<table>
<thead>
<tr>
<th>Students will</th>
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<tbody>
<tr>
<td>• “communicate an understanding that various individuals and groups have different opinions on environmental issues”</td>
</tr>
</tbody>
</table>
### GRADE 9 (Academic)

**Canadian and World Studies -- Geography of Canada**

**Strand: Human-Environment Interactions**

**Overall Expectations**

**Students will**
- “analyse ways in which natural systems interact with human systems, then make predictions about the outcomes of these interactions”

**Understanding Concepts**

**Students will**
- “demonstrate an understanding of how human activities (e.g. agricultural and urban development ...) affect the environment”

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### GRADE 9 (Applied)

**Canadian and World Studies -- Geography of Canada**

**Strand: Human-Environment Interactions**

**Overall Expectations**

**Students will**
- “demonstrate an understanding of the interdependence of natural and human systems in Canada’s rural and urban landscapes”

**Understanding Concepts**

**Students will**
- “demonstrate an understanding of how human activities (e.g. rural and urban development...) affect the environment”
Background

The production of a newspaper requires skills in a variety of areas. For example, story writing, editing, design and layout, artistic ability, research and decision making are all skills involved in such an activity.

In a classroom with a diversity of individual skills and learning styles, this type of project can be both challenging and rewarding. It draws on individual strengths and pulls them together in a group effort. The coordinated effort would result in an informative newspaper containing articles about past and present activities and events on the canal.

Purpose

The major purpose of this activity is to pull together a selection of information on the Rideau Canal, and develop a newspaper. The production of the paper could be a summational method of evaluation at the end of a unit on the Rideau Canal, or it could serve as a mini-unit in itself.

Materials:
- Research material (see resources)
- Cameras
- Typewriter or word processor
- Tape recorder
- Writing materials

Method

Students will identify a diversity of issues related to the Rideau Canal and develop their own opinion concerning some of these issues. Students will produce a newspaper containing articles about the Rideau Canal.

Resources

Please Note: The books are available through local libraries or the Rideau Canal Office in Smiths Falls. The pamphlets have been included with this kit. The videos are available at the Rideau Canal office as well.

Rideau Canal
Tel: (613) 283-5170
34A Beckwith St. S.
Smiths Falls, Ontario  K7A 2A8
**Literature**

Fryer, Mary Beacock and Adrian G. Ten Cate, ed.  
*The Rideau: A Pictorial History of the Waterway*  
Brockville, Besancourt Publishers, 1981

Legget, Robert F.  
*Rideau Waterway*  

Passfield, Robert W.  
*Building the Rideau Canal: A Pictorial History*  
Toronto, Fitzhenry and Whiteside in association with Parks Canada, 1982

**Pamphlets**

Canadian Heritage, Parks Canada  
*Boating Safely: Trent-Severn Waterway, Rideau Canal*  
Minister of Supply and Services Canada

Canadian Heritage, Parks Canada  
*Historic Canals: Trent-Severn Waterway, Rideau Canal*  
Hours of Operation and Fees  
Minister of Supply and Services Canada

Ducks Unlimited Canada  
*Purple Loosestrife*

Environment Canada, Canadian Parks Service  
*Rideau Canal Shorelines: A Resource to Protect*

Environment Canada, Parks Service  
*Canada's National Historic Canals*

Environment Canada, Parks Service  
*Locking Through Safely: Trent-Severn Waterway, Rideau Canal*  
Minister of Supply and Services Canada

Environment Canada, Parks Service  
*Rideau Canal*  
Minister of Supply and Services Canada

Carley, Todd and Judy Sutherland, ed.  
*Stop Washing Away Shoreline Habitat: Activities, Puzzles and Games*  
Friends of the Rideau, 1994

Ministry of Natural Resources  
*Zebra Mussels, Boater’s Guide*  
Queen’s Printer for Ontario

Please Note: Pamphlets are provided in Resources.

**Videos**

**John By: Hero Without Honour**  
Image Projection Ltd. and Communicado Associates Inc., 1994  
Running Time: 23 minutes

**Rideau Canal: Reflections**  
[1991] National Film Board of Canada, 1993  
Running Time: 11 minutes
**Procedure**

1. Use a newspaper as a model and explain some of the various parts to the students. In addition to regular articles, there are other special sections such as comics, sports, and editorials. Draw attention to sections you feel could be modelled by the students in their newspaper.

2. Break class up into groups of 2 to 4 students and have them decide what section they would like to model or the type of article they would like to write.

**Article Suggestions:**
- Travel: Boating on the Rideau Today
- History of the Rideau Canal
- Colonel John By: The man behind the Rideau Canal
- Zebra Mussels: The Risk on the Rideau
- How the Locks Work
- How You Can Help Prevent Shoreline Hardening
- Rideau Wetlands: Why They Are Important
- Steamboats on the Rideau
- Sappers and Miners: Who?

3. Group members should have specific roles. This will allow different interests and talents to emerge.

**Group Role Suggestions:**
- illustrator
- writer
- editor
- designer
- researcher

Have students use a combination of fact and opinion. They can choose to write in a humorous or satirical style, so long as the information is accurate. Show the students how to acknowledge sources and credits properly.

4. Once information starts to accumulate and writing begins, the production phase of the paper can begin. Use artistic talents to produce illustrations to accompany articles.

5. Stories and illustrations should be submitted to another small group of students for layout and design. Be sure to include the opinions and input from the entire class at this point.

6. Once the newspaper is complete, publish it so everyone involved in its production has a copy of their group effort. Consider distributing copies to fellow students in other classrooms. Take it even further and submit your efforts to the Rideau Canal Office in Smiths Falls.

7. Wrap up the activity with a group discussion on all the articles which appear in the newspaper. Have individual groups share their research with others in the class.

**Extensions:**
Develop advertisements relating to the Rideau Canal to appear in the paper:
- develop an ad to sell different gate mechanisms
- develop a travel ad for the luxury steamboat Rideau Queen
- “Come Travel the Rideau Canal”
## Curriculum Links

### GRADE 7

#### Language

<table>
<thead>
<tr>
<th>Strand: Oral and Visual Communication</th>
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</thead>
<tbody>
<tr>
<td><strong>Overall Expectations</strong></td>
</tr>
<tr>
<td>Students will</td>
</tr>
<tr>
<td>• “contribute and work constructively in groups” <strong>All Participants</strong></td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Media Communication Skills</th>
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</thead>
<tbody>
<tr>
<td><strong>Students will</strong></td>
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<tr>
<td>• “describe the function of different elements in magazines and newspapers (e.g. headline, photograph, regular column, feature article, editorial)” <strong>All Participants</strong></td>
</tr>
<tr>
<td>• “create a variety of media works (e.g. a class newspaper...)” <strong>All Participants</strong></td>
</tr>
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</table>

#### Strand: Writing

<table>
<thead>
<tr>
<th><strong>Overall Expectations</strong></th>
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<tbody>
<tr>
<td><strong>Students will</strong></td>
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<tr>
<td>• “produce media texts using writing and materials from other media” <strong>Writers and Editors</strong></td>
</tr>
<tr>
<td>• “revise and edit their work, focussing on content and elements of style (e.g. diction), independently and in collaboration with others” <strong>Writers and Editors</strong></td>
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</table>

#### The Arts

<table>
<thead>
<tr>
<th>Strand: Visual Arts</th>
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<tbody>
<tr>
<td><strong>Overall Expectations</strong></td>
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<tr>
<td><strong>Students will</strong></td>
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<tr>
<td>• “produce two- and three-dimensional works of art that communicate a variety of ideas (thoughts, feelings, experiences) for specific purposes and to specific audiences, using appropriate art forms” <strong>Illustrators and Designers</strong></td>
</tr>
</tbody>
</table>
GRADE 7 continued

**History**

**Topic: British North America**

**Developing Inquiry/Research and Communication Skills**

**Students will**

- “locate relevant information about how settlers met the challenges of the new land, using a variety of sources” **Researchers**

- “communicate the results of inquiries for specific purposes and audiences, using media works, ..., drawings, ...” **All Participants**

**Science and Technology**

**Strand: Life Systems**

**Topic: Interactions Within Ecosystems**

**Overall Expectations**

**Students will**

- “demonstrate an understanding of the effects of human activities ... on the sustainability of ecosystems” **All Participants**

**Developing Skills of Inquiry, Design and Communication**

**Students will**

- “communicate the ... results of investigations for specific purposes and to specific audiences, using media works, ... and drawings” **All Participants**
### GRADE 9 (Academic and Applied)

**English**

<table>
<thead>
<tr>
<th><strong>Strand: Writing</strong></th>
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<tr>
<td><strong>Overall Expectations</strong></td>
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<tr>
<td><strong>Students will</strong></td>
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<tr>
<td>• “use print and electronic sources to gather information and explore ideas for their written work”</td>
</tr>
<tr>
<td>• “identify the literary and informational forms suited to various purposes and audiences and use the forms appropriately in their own writing, with an emphasis on”:</td>
</tr>
<tr>
<td>“supporting opinions or interpretations with specific information” (Academic)</td>
</tr>
<tr>
<td>“communicating information accurately” (Applied)</td>
</tr>
<tr>
<td>• “revise their written work, independently and collaboratively, with a focus on support for ideas and opinions, accuracy, clarity, and unity”</td>
</tr>
<tr>
<td>• “edit and proofread to produce final drafts, using correct grammar, spelling, and punctuation, according to the conventions of standard Canadian English, with the support of print and electronic resources when appropriate”</td>
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<table>
<thead>
<tr>
<th><strong>Strand: Media Studies</strong></th>
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<tbody>
<tr>
<td><strong>Overall Expectations</strong></td>
</tr>
<tr>
<td><strong>Students will</strong></td>
</tr>
<tr>
<td>• “use knowledge of a variety of media forms, purposes, and audiences to create media works”</td>
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</table>
To Convert or Not to Convert

Background

Conducting a mock trial can be exciting and a good learning opportunity for children of all ages. It also provides a wonderful opportunity for students to reach their individual learning needs. Assigning group members to specific tasks, preferably in areas of interest or talent, can lead to a successful learning experience for all.

Children already know a great deal about trials. Televisions shows such as “Law and Order”, “Courthouse” and the News reveal much to students and can help to form interest in the mock trial. Viewing such programs and discussing them later is an excellent way to set the tone for a mock trial. It can also provide needed information about the judicial process.

Method

Students will develop and conduct a mock trial to form a decision regarding lock conversion to a hydraulic system. They will use dramatic skills to role-play characters related to the potential conversion of the canal to an electrically operated system.

Students will develop their own opinion about the natural and historical importance of the Rideau Canal.

Activity

Materials:
- Group Agenda Cards (you make them!)
- Newspaper clippings (Resources)
- Optional - costumes, video equipment

Procedure:
Students should become familiar with the issue at hand and the characters involved before anything else. Plan to spend several days reviewing the issue. Ask students to consider the possible motives of characters involved and the purpose for holding a mock trial.

Setup:
- Divide the class into 8 teams.
- Adjust numbers according to class size.
Note: Photocopy originals for the newspaper clippings are provided in Resources.

Newspaper Clipping Titles:
Lock system to be studied before more electrification
Changes on the Rideau Canal system
Electric Locking Big Joke
Untitled
Twinning Rideau Locks… May Answer Conflicting Criticism
Electrify Rideau? Definite “No” from Boating Enthusiasts
Rideau Efficiency
Criticism on operation of the Rideau Canal
Save the Rideau
Untitled
Reserved Several Thousand Acres for Public Use
We Support the Rideau’s Modernization
Modernizing the Rideau Canal
Ottawa face-lift: Modernizing canal could spoil tourist attraction
## Group Agendas

### Team 1: Court Historians…

**General Task**  
Place the events leading up to the trial in historical and geographical context.

**Specific Tasks**  
1. Prepare a large map of the canal system and corridor communities. Illustrate nearby lakes and rivers and the 2 major rivers connected by the canal.
2. Prepare a 5 minute speech on the general history of the canal and the most recent events leading up to the trial.
3. Prepare a 5 minute speech to follow the one preceding on the manual operation of the locks since their beginning.

### Team 2: Judge’s Opening Remarks…

**General Task**  
Open the court session and present general facts on the issue.

**Specific Task**  
1. Prepare a 5 minute speech to open the court session. Briefly discuss the reasons the case is in court.

### Team 3: The Defence…

**General Task**  
Prepare the case for the Ministry of Transportation to demonstrate their reasoning for wanting to convert the canal to an electrically operated system.

**Specific Tasks**  
1. Create a large poster advertising the convenience and versatility an electrically operated canal would offer.
2. Write a 5-10 minute speech which summarizes why the Ministry of Transportation felt the canal should be changed.

### Team 4: The Prosecution…

**General Tasks**  
Prepare the case on behalf of a local community group to demonstrate why the canal should remain in its original, manually operated state.

**Specific Tasks**  
1. Make a large poster illustrating the historical and natural significance of the Rideau Canal.
2. Write a 5-10 minute speech that summarizes why the Rideau Canal system should remain in its original state as an historic canal.
**Team 5: Witness for the Ministry of Transportation…**

*Engineer from the Department*

**General Task**
Prepare a short speech that he/she would give in defence of the Ministry of Transportation.

**Specific Task**
1. Illustrate on poster size paper the workings of a hydraulic lock.

2. Prepare a speech which summarizes how a hydraulic lock operates. Elaborate on its efficiency, in terms of less manpower, maintenance and operation time.

---

**Team 6: Witness for the Historical Group…**

*Colonel John By (A ghost appearance)*

**General Task**
Convey the feeling Col. John By might have held regarding this issue.

**Specific Tasks**
1. Illustrate the workings of the 3 different gate mechanisms found on the Rideau Canal, on poster size paper. (3 total)

2. Prepare a personal speech (5-10 minutes) Col. John By might give on his feeling regarding conversion of the Rideau Canal. How do you think he would feel?

---

**Team 7: Artistic Directors…**

**Specific Tasks**
1. Prepare a program for the “Mock Trial” for the audience.

2. Identify costumes appropriate for Col By, the judge, members of the defence and prosecuting parties.

3. Organize the sequencing and script for the trial.

---

**Team 8: Linking the Issues to Today…**

**General Task**
Examine the outcome of the issue during the early 1970’s. Connect the issue with current issues.

**Specific Tasks**
1. Prepare a 3 minute speech outlining the Rideau Canal’s functions today. What is it used for and by whom? Who governs or takes care of the canal to ensure it will be around in the future for others to enjoy. What are the fees to use the locks? What time of the year is it navigable? What are some of the major historic sites you might visit along the Rideau Canal today?

2. Prepare a pamphlet outlining some of the major issues the Rideau Canal is facing today. Most of these issues are dealing with destruction of natural ecosystems, invading species, loss of cultural landscapes, etc.
Curriculum Links

GRADES 7 & 8

<table>
<thead>
<tr>
<th>The Arts</th>
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<tbody>
<tr>
<td><strong>Strand: Drama and Dance</strong></td>
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<tr>
<td>“Role playing is a key component of the drama and dance curriculum.” <strong>Teams 1-6</strong></td>
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<table>
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<tr>
<th>Language</th>
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<tbody>
<tr>
<td><strong>Strand: Reading</strong></td>
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<tr>
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</tr>
<tr>
<td>• “decide on a specific purpose for reading, and select the material they need from a variety of appropriate sources” <strong>All Participants</strong></td>
</tr>
<tr>
<td><strong>Reasoning and Critical Thinking</strong></td>
</tr>
<tr>
<td>Students will</td>
</tr>
<tr>
<td>• “identify the main ideas in information materials, and explain how details support the main ideas” <strong>All Participants</strong></td>
</tr>
<tr>
<td>• “clarify and develop their own points of view by examining the ideas of others” <strong>All Participants</strong></td>
</tr>
<tr>
<td>• “select appropriate reading strategies (e.g. skim text for specific information...)” <strong>All Participants</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Strand: Oral and Visual Communication</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Overall Expectations</strong></td>
</tr>
<tr>
<td>Students will</td>
</tr>
<tr>
<td>• “express and respond to a range of ideas and opinions concisely, clearly, and appropriately” <strong>All Participants</strong></td>
</tr>
<tr>
<td>• “contribute and work constructively in groups” <strong>All Participants</strong></td>
</tr>
<tr>
<td>• “demonstrate the ability to concentrate by identifying main points and staying on topic” <strong>All Participants</strong></td>
</tr>
</tbody>
</table>
GRADE 7

<table>
<thead>
<tr>
<th>Language</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strand: Writing</strong></td>
</tr>
<tr>
<td><strong>Overall Expectations</strong></td>
</tr>
<tr>
<td>Students will</td>
</tr>
<tr>
<td>• “communicate ideas and information for a variety of purposes (to outline an argument, to report on observations) and to specific audiences, using forms appropriate for their purpose and topic”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>History</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Topic: British North America</strong></td>
</tr>
<tr>
<td><strong>Understanding Concepts</strong></td>
</tr>
<tr>
<td>Students will</td>
</tr>
<tr>
<td>• “describe the impact of the War of 1812 on the development of Canada (e.g. .... the Rideau Canal, ...)”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Geography</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Topic: The Themes of Geographic Inquiry</strong></td>
</tr>
<tr>
<td><strong>Understanding Concepts</strong></td>
</tr>
<tr>
<td>Students will</td>
</tr>
<tr>
<td>• “demonstrate an understanding of the interaction theme (e.g. the environment provides opportunities and challenges; people change the environment as they use it)”</td>
</tr>
<tr>
<td>• “demonstrate an understanding of the movement theme (e.g. the flow of people, goods, and information and the factors that affect this flow)”</td>
</tr>
</tbody>
</table>

| Applying Concepts and Skills in Various Contexts |
| Students will |
| • “produce a report on current environmental events in the news” | **Teams 2 - 6, 8** |
| • “communicate an understanding that various individuals and groups have different opinions on environmental issues” | **All Participants** |
GRADE 7 continued

## The Arts

### Strand: Visual Arts

**Creative Work**

Students will

- “organize their art works to communicate ideas, using at least one of the principles of design specified for this grade (e.g. use informal balance in art work to aid in the depiction of two sides of an issue)” **Teams 1, 3 - 8**

### Strand: Drama and Dance

#### Knowledge of Elements

Students will

- “demonstrate understanding of the motives of the characters they interpret through drama and dance (e.g. explain the motives and accurately represent the attitudes of a character through voice quality, gestures, body movements)” **Teams 1 - 6**

- “write in role in various forms (e.g. reports, speeches, interviews), showing their understanding of the complexity of a dramatic situation, and using appropriate vocabulary, tone, and voice for the character portrayed” **Teams 1 - 6**

- “explain the significance of the materials, props, costumes, and symbols used in drama and dance” **Team 7**

**Creative Work**

Students will

- “assemble, rehearse, and perform a collection of drama (and dance) works based on themes and issues drawn from a variety of sources ...” **All Participants**

## Science and Technology

### Strand: Life Systems

**Topic: Interactions Within Ecosystems**

**Overall Expectations**

Students will

- “demonstrate an understanding of the effects of human activities and technological innovations, as well as the effects of changes that take place naturally, on the sustainability of ecosystems” **Teams 4, 8**
# Grade 8

## Language

### Strand: Writing

**Overall Expectations**

**Students will**
- “Communicate ideas and information for a variety of purposes (to evaluate information, to compare points of view) and to specific audiences, using forms appropriate for their purpose and features appropriate to the form” **All Participants**

## The Arts

### Strand: Visual Arts

**Creative Work**

**Students will**
- “produce two- and three-dimensional works of art (i.e. works involving media and techniques used in drawing, painting,...) that communicate a range of thoughts, feelings, and experiences for specific purposes and to specific audiences” **Teams 1, 3 - 8**

### Strand: Drama and Dance

**Overall Expectations**

**Students will**
- “create drama pieces, selecting and using a variety of techniques” **All Participants**

#### Knowledge of Elements

**Students will**
- “write in role in various forms (e.g monologues, speeches, radio or television broadcasts), showing understanding of the complexity of a dramatic situation and using appropriate vocabulary, tone, and voice for the character portrayed” **Teams 1 - 6**

#### Creative Work

**Students will**
- “write in role, analysing the subtext of a script and the attitudes and points of view of the characters portrayed” **Teams 1 - 6**
<table>
<thead>
<tr>
<th><strong>GRADE 8 continued</strong></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Science and Technology</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strand: Matter and Materials</strong></td>
</tr>
<tr>
<td><strong>Topic: Fluids</strong></td>
</tr>
<tr>
<td><strong>Relating Science and Technology to the World Outside the School</strong></td>
</tr>
<tr>
<td><strong>Students will</strong></td>
</tr>
<tr>
<td>• “describe some effects of technological innovations related to hydraulics... (e.g. getting water from a tap rather than a well results in a reduced need for manual labour...)” <strong>Teams 3 &amp; 5</strong></td>
</tr>
</tbody>
</table>

| **Strand: Earth and Space Systems** |
| **Topic: Water Systems** |
| **Relating Science and Technology to the World Outside the School** |
| **Students will** |
| • “evaluate human use of water and the economic and environmental effects of that use (e.g. ..., tourism, ..., control of water flow)” **Teams 3 - 5, 8** |
Background

Many different bridges span the Rideau Canal system today (Fig. 1). In all, there are 59 bridges which can be found along the canal course from Ottawa to Kingston. The first bridge erected on the Rideau was located at Burrits Rapids in 1824, which pre-dated the construction of the canal. The oldest bridge on the system today dates back to 1888, as all of the original structures have been replaced since the time of canal construction.

There are several different bridge designs on the canal, including various swing, fixed, and bascule structures (Figs. 2, 3). The swing bridge structure is moveable and swings horizontally about a vertical axis. Swing bridges can either be centre-bearing (Fig. 4) or rim-bearing (Figs. 5, 6), and conform either to the equal arm or unbalanced arm configuration.

Many swing structures on the canal have a truss, which is an inflexible frame formed by a combination of bridge members. When properly designed, a truss consists of a triangle or connection of triangles, and acquires its strength from the rigidity of that connection. Under a heavy load a triangle will hold its shape until its side members or joints are crushed. The kingpost truss bridge is the earliest form of truss used in bridge building. It consists of a centre vertical post, the kingpost, with a diagonal brace on each side, forming two triangles.

There are five timber kingpost truss swing bridges on the Rideau Canal. Their basic structure has been maintained since 1864, with slight modifications. All of these bridges are manually operated by lock staff. They contribute a great deal towards maintaining the original appearance of the canal. Examples of this type of bridge can be found at Nicholsons and Kilmarnock Lockstations (Figs. 7, 8).

Steel through truss swing bridges can also be found on the Rideau Canal. These structures are all riveted steel and were erected between 1888 and 1903. At that time, the Department of Railways and Canals followed a policy of replacing the timber kingpost truss swing bridges with iron and/or steel superstructures. Examples of these bridges can be found at Long Island and the Narrows Lockstations (Figs. 9, 10).

There are five through plate girder swing bridges on the canal. The two oldest structures were built at Merrickville Locks in 1933, and at Chaffey’s Locks in 1949. All these structures are electrically operated, with the exception of Chaffey’s, which is hydraulically operated (Fig. 11).

Fixed bridges of various types are found at certain locations along the Rideau Canal system. There are fixed timber bridges at

Please Note: The figure #s refer to bridge photos which are provided in Resources.
Jones Falls and Upper Brewers Lockstations (Fig. 12). These bridges are low-level, fixed bridge structures, with rock filled timber piers. Their presence adds much to the picturesque settings of the lockstations. Smiths Falls has a low truss bridge on Confederation Drive which spans a waste weir channel (Fig. 13). A reinforced concrete high-level bridge can be found in Ottawa, just above Ottawa Locks. This structure, called the Plaza bridge, was constructed just prior to World War One, in 1912.

A bascule bridge structure has a moveable leaf, which can be raised about a horizontal axis, with the aid of counter-weights attached to the opposite end. There is a Canadian National Railways bascule bridge above Detached Locks in Smiths Falls, dating back to 1911 (Fig. 14). It is a national historic site. Another bascule bridge is on the Kingston Causeway, which was built in 1915-16 (Fig. 15).

The bridges found along the Rideau Canal system are included in its historic nature. Some bridges are replicas of the swing bridges built on the canal at an earlier era. Other bridges of various types were constructed at different periods in the canal’s history, and provide a visual background of the bridge designs used. These structures depict the changes in bridge building technology from the early 19th century to the present.

**Method**

Students will become familiar with several design concepts related to bridge building. Students will perform activities to challenge their understanding of forces, tension, and frame design and then use this information to build a model bridge.

**Activities**

**Introduction**

Review the various types of bridges which are on the Rideau Canal system with the students. Use the photos provided as visual aids for the discussion.

**Procedure**

Set up the first three activities around your classroom. Have students travel around the room and perform the activities individually or as a group. The activities should emphasize design concepts related to bridge construction.
1. *Bridge of Knives*…

**Materials:**
- 3 table knives
- 4 cups

**Setup:**
- Set 3 of the cups on a table to form a triangle with its sides slightly longer than the length of the knives.

![Diagram of three cups forming a triangle with knives](image)

- Use the knives to build a bridge that will support the 4th cup.

![Diagram of a bridge with knives](image)

**Explanation:**
At first, it may not seem so, but each knife is being supported at both ends in this structure. The added weight of the fourth cup bends each knife down slightly and this balances the stresses of tension and compression. The upward and downward forces are equal, and friction prevents the knives from sliding sideways.
2. Beams...

Materials:
1 wooden meter stick
2 known weights, one heavier than the other.

Setup:
• With a partner, hold a meter stick by the ends and hang a weight on the meter stick until it bends.

![Diagram of a meter stick bent by a weight]

• Now turn the meter stick on its edge. Try to hang more weight from it. The meter stick should hold more weight.

![Diagram of a meter stick on its edge]

Explanation:
The stiffness of a beam is inproportion to its height. A beam on its edge is higher than a beam laid flat, and so is stiffer. Next time you see a house or a deck being built, look at how the supporting beams are placed under the floor or ceiling. How would the beams of a bridge run in order to hold a lot of weight?

Please Note: The next activity will help show you how the forces work in a triangular framework.
3. Frames...

Introduction:
Simple beam and girder bridges are very easy and inexpensive to construct. Bridges of moderate length are often of this type. Many of the bridges you see along the Rideau Canal use these same simple principles in their construction.

As you will see in the next activity, a triangular framework is very resistant to any change of shape when forces are applied to it. When a force is exerted on a triangular shape, all the sides work together to hold it in place. Bracing a framework of any kind by creating triangular shapes within it, is the key to building a strong and stable structure.

Materials:
- strips of wood (popsicle sticks)
- small finishing nails
- 2 pieces of wire

Setup:
- Make a square frame out of strips of wood with one nail in each corner. Don't drive the nails in all the way.
- Push down in the middle of the frame. Does it feel strong?

Next:
- Create a similar frame, but attach a wire diagonally across the frame.
- Wrap the wire around the nails and drive the nails all the way in.
- Apply the same force, applying pressure on an angle to the middle of the frame. What happens?

Does the brace make the frame more rigid?
• Now add another wire running diagonally across the other corners.  
• Apply the angled force.  What happens?

• Now test the rigidity of the frame by applying an angled force.  What is the result? 

This should greatly improve the bracing of the frame.  No matter which way the frame tries to collapse, one of the braces is always being stretched.

This single brace will be about as effective as the 2 thin wire braces which were used before.

Next:  
• A square frame can also be braced with a single diagonal strip.  It must be fairly rigid though, as we discovered from the wires.

Setup:  
• Create another square frame.  
• Add a single wooden brace diagonally on the square frame.  
What shapes do you create by doing this?
4. Design Project...

As a way of evaluating students’ knowledge of design concepts, have them design a bridge. They should now have an understanding of some basic design concepts and be able to apply them in the construction of a model bridge.

Student Task
• Design a bridge 50cm long and 10cm wide.
• The bridge should be able to hold a set weight if placed on it.

Materials:
<table>
<thead>
<tr>
<th>Frame</th>
<th>Connecting Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>straws</td>
<td>pipe cleaners</td>
</tr>
<tr>
<td>wooden splinters</td>
<td>tape</td>
</tr>
<tr>
<td>toothpicks</td>
<td>pins</td>
</tr>
<tr>
<td>newspaper (rolled into tight tubes)</td>
<td>plasticine</td>
</tr>
<tr>
<td></td>
<td>glue</td>
</tr>
</tbody>
</table>

Building a Model Truss Bridge
If you have students who need some ideas, here is a design for a Truss Bridge.

Materials:
Frame and connecting materials as mentioned above.

Setup:
1. Assemble two frames with the dimensions 50cm long and 10cm wide. Cut the top and bottom beams to length. Cut the 10cm posts and glue the beams to them. Put a pin in each joint to hold together until the glue dries.

2. Cut diagonal braces to fit and glue them to one truss. After glue is dry, compare the two trusses by gently moving them. The truss with the braces will be quite rigid. Finish the second truss.

3. Connect the two trusses with 10 cm crossbeams at the top and bottom. Pins can be used to hold the joined parts together. Be sure the sides are perpendicular to the top and bottom.

4. Cut a strip of cardboard or wood to serve as the roadway and secure this in place with glue. Notice the edgewise strength of the roadway makes it difficult to twist the bridge.
5. Complete the bracing with light diagonal braces across the top and bottom and in the corners.
## Curriculum Links

### GRADE 7

<table>
<thead>
<tr>
<th><strong>Science and Technology</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strand: Structures and Mechanisms</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Topic: Structural Strength and Stability</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Students will</strong></td>
<td></td>
</tr>
<tr>
<td>• “investigate how different structural forms support or withstand loads by designing, building, and testing ... frame structures”</td>
<td></td>
</tr>
</tbody>
</table>

### Understanding Basic Concepts

**Students will**

• “describe, using their observations, ways in which different forces can affect the stability of a structure (e.g. certain forces may cause a structure to shear, twist, or buckle)”

• “demonstrate awareness that the effect of forces acting on a structure under load depends on the magnitude, direction, and point and plane of application of the forces”

### Developing Skills of Inquiry, Design and Communication

**Students will**

• “formulate questions about and identify needs and problems related to the strength of structures and explore possible answers and solutions (e.g. determine what caused structural failure and propose ways of supporting a specific load)”

### Relating Science and Technology to the World Outside the School

**Students will**

• “describe, using their observations, the function of symmetrical design in structural and mechanical systems (e.g. in bridges)”

Wordsearches

The Rideau Canal Environment

Purple Loosestrife  Emergent  Zebra Mussels  Osprey
Ecosystem         Wetlands       Beaver         Habitat
Bufferzone     Loon          Fish           Water
Diversity          Algae           Great Blue Heron
Lifestyles and History of the Canal

B AIRALAMTSRNWOTYB
LHAGABYOICAGOIMMO
OAWAITGEILARIAUED
COSNGTCANDLESMLJ
KBTUROYIMMSEAIRS
HOIEERRFOUNDRYSAT
OAPMAQUINIADASEN
UKNDTMMSSAPPERSLYA
SHLIBYTBEMPEPALPAR
EDLANTHIOEPPIESG
XIYTEGRUAIMLOTUI
MLOAIATINTWPOLM
IPJLMILILRKSHPBCM
LANTERNBMINERSLI
ROOXEJOLLYANUZ
HOUTCREATIONERP
AHKNONEEBRUITVAIH

Foundry
Military
Recreation

Steamboats
Irish
Candles

Mills
Miners
Blockhouse

Sappers
Malaria
Lantern

Bytown
Immigrants

Wordsearches

THIS PAGE MAY BE COPIED
Technology of the Rideau Canal

Crab  Bushhammer  Swing Bar  Stone Arch Dam
Feathers  Gate  Hydraulics  Blacksmith
Forge  Sluice  Endless Chain  Swing Bridge
Adze  Chisel
Answers to Wordsearches

The Rideau Canal Environment:

Lifestyles and History of the Canal:
Technology of the Rideau Canal:

Word Searches
The Cunning Canal Crossword

CLUES:

Across
1. Men ordered over from England to work on Canal.
5. These vessels travelled the Rideau Canal with vacationing passengers.
7. The Canal’s first role or phase.
8. Number of LOCKSTATIONS on the Rideau Canal.
10. Allows water to travel into and out of the lock.
11. Long, slim windows on the outside of a blockhouse.
14. Tradesman who prepares metal parts for locks.
17. Sculpt and prepare stone for lock walls.
19. Tall, square building used for military supply and emergency residential purposes.
21. Fireproof material used to shingle roofs of lockmaster’s house, blacksmith’s shop and blockhouse.
22. Door of a lock.

Down
2. River forming part of the Rideau Canal system near Kingston.
3. Times of unrest in Upper Canada between 1837 and 1838.
4. A private venture by enterprising Perth settlers.
6. Highest point in a water system such as the Rideau.
9. Winch used to open and close lock gates.
12. A large water bird characterized by a ring around its neck.
13. Name of house on the hill at Jones Falls.
15. Stone used in construction of lock walls.
16. Power used to operate Newboro, Smiths Falls and Black Rapids locks.
18. Ottawa’s original name.
20. A gate opening mechanism where chains run down the lock wall and across the lock floor where they attach to the gate.
ANSWERS

Across
1. Sappers and Miners
5. Steamboats
7. Military
8. Twenty-four
10. Sluice
11. Loopholes
14. Blacksmith
17. Stonemasons
19. Blockhouse
21. Tin

Down
2. Cataraqui
3. Rebellions
4. Tay Canal
6. Summit
9. Crab
12. Loon
13. Sweeney House
15. Limestone
16. Electricity
18. Bytown
20. Endlesschain

22. Gate
Quiz

The Canal Quiz!…

Background

Do you know what Rideau Ferry’s original name was or the weight of one lock gate? Questions like these and more can be found in the “Canal Quiz”. Everything you’ve ever wanted to know about the Rideau Canal is in the “Canal Quiz”. Interesting facts about the canal’s general history, lifestyles of people from the past, the natural environment and technology related to the canal are included.

The quiz consists of three categories: knowledge and history, environment, and technology. Each category covers some basic facts and reveals interesting bits of trivia about the canal.

Materials:
• Canal Quiz sheets (3 categories)
• Bristol board (3 colours)
• scissors
• glue

Method

Students will reinforce and/or review their knowledge of different aspects of the Rideau Canal through asking and answering various trivia questions.

Procedure

Cut bristol board sheets into card size squares. Use one colour to identify the different categories (eg. green coloured bristol board cards for environment category). Cut up the category quiz sheets into each separate question and answer. Glue question on front side of selected bristol board card and glue the answer on the back of the card. Do this for each category, and question and answer.

The quiz can be used in a number of ways in your classroom. Use it as a classroom Jeopardy-type game or make several sets of the knowledge cards and have students pair up during free time to quiz a partner. This allows students to reinforce and review facts they may have learned about the canal in a unit of study. It makes for an excellent study tool. Or use it as a means of evaluating students.
## Knowledge and History Category

<table>
<thead>
<tr>
<th>FRONT</th>
<th>BACK</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years between which the canal was built.</td>
<td>1826 to 1832</td>
</tr>
<tr>
<td>Sent from England to supervise and oversee the construction of the Rideau Canal.</td>
<td>Colonel John By</td>
</tr>
<tr>
<td>The Rideau Canal was built in the wake of which war?</td>
<td>The War of 1812.</td>
</tr>
<tr>
<td>Once travelled the Rideau Canal providing luxury accommodation to its passengers.</td>
<td>Steamboats</td>
</tr>
<tr>
<td>The illness many canal labourers suffered from during construction.</td>
<td>Malaria, also called ague or swamp fever.</td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Lockmaster at Jones Falls from 1832 to 1871.</td>
<td>Peter Sweeney</td>
</tr>
<tr>
<td>Ottawa's original name.</td>
<td>Bytown</td>
</tr>
<tr>
<td>A period when the militia was called to defend the canal.</td>
<td>During the Rebellions of 1837 and 1838.</td>
</tr>
<tr>
<td>Rideau Ferry's original name.</td>
<td>Oliver's Ferry</td>
</tr>
<tr>
<td>An issue related to the canal which caused friction with the church in the 19th century.</td>
<td>Locks opened on Sundays.</td>
</tr>
<tr>
<td>Men ordered over from England who worked as skilled tradesmen and police or security during canal construction.</td>
<td>Sappers &amp; Miners</td>
</tr>
<tr>
<td>Three pieces of clothing worn by Sappers &amp; Miners.</td>
<td>Forge cap, coatee, stock, cotton shirt, wool pants, boots.</td>
</tr>
<tr>
<td>Reason why pants were buttoned up in front.</td>
<td>Zippers were not invented yet.</td>
</tr>
<tr>
<td>Fashions of dress for women in the 1800’s.</td>
<td>Long dress, bonnet, petty coat.</td>
</tr>
<tr>
<td>Name 2 countries from which men came from to work on the Canal.</td>
<td>Scotland, Ireland, England and the United States</td>
</tr>
<tr>
<td>Name 3 foods eaten by a lockmaster’s family.</td>
<td>Salt pork, potatoes, milk, butter, fish, duck venison and berries.</td>
</tr>
<tr>
<td>Environment Category</td>
<td></td>
</tr>
<tr>
<td>----------------------</td>
<td>--</td>
</tr>
<tr>
<td>Name of water-bird which is an expert diver.</td>
<td>Loon</td>
</tr>
<tr>
<td>Name the 4 types of wetlands.</td>
<td>Bog, marsh, swamp and fen.</td>
</tr>
<tr>
<td>Chemical Formula for water.</td>
<td>H₂O</td>
</tr>
<tr>
<td>Serve as water reservoirs, filters, and wildlife habitat.</td>
<td>Wetlands</td>
</tr>
<tr>
<td>Geographic landscape characterized by rugged, rocky outcrops and sculptured valleys.</td>
<td>Canadian shield</td>
</tr>
<tr>
<td>A tall flowered plant causing</td>
<td>Purple loosestrife</td>
</tr>
<tr>
<td>Problem</td>
<td>Term</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>problems in Eastern Ontario’s wetlands.</td>
<td></td>
</tr>
<tr>
<td>A striped, freshwater mollusc.</td>
<td>Zebra mussel</td>
</tr>
<tr>
<td>The interaction of land and animals.</td>
<td>Ecosystem</td>
</tr>
<tr>
<td>Wearing away of land by water.</td>
<td>Shoreline erosion</td>
</tr>
<tr>
<td>The track left by a boat passing through the water.</td>
<td>Wake</td>
</tr>
<tr>
<td>Microscopic organisms.</td>
<td>Zooplankton</td>
</tr>
<tr>
<td>Microscopic plants.</td>
<td>Phytoplankton</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>Highest point in the Rideau System.</td>
<td>(Summit) Upper Rideau Lake near Westport.</td>
</tr>
<tr>
<td>Large bird nesting on top of high structures like hydro poles.</td>
<td>Osprey</td>
</tr>
<tr>
<td>Greyish-blue bird with a long neck and legs, found standing at water's edge.</td>
<td>Great blue heron</td>
</tr>
<tr>
<td>An insect who swims erratically on the surface of water.</td>
<td>Whirligig beetle</td>
</tr>
<tr>
<td>The two water bodies connected by Rideau Canal.</td>
<td>Lake Ontario and Ottawa River</td>
</tr>
<tr>
<td>Portion of the Canadian shield which crosses the Rideau Canal.</td>
<td>Frontenac Axis</td>
</tr>
</tbody>
</table>
### Technology Category

<table>
<thead>
<tr>
<th>Description</th>
<th>Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>A fireproof material used to shingle the roof of a blacksmith shop, lockmaster's house and a blockhouse.</td>
<td>Tin</td>
</tr>
<tr>
<td>Allows water to travel into and out of the lock.</td>
<td>Sluice</td>
</tr>
<tr>
<td>Opens and closes gates of locks.</td>
<td>Gate crab</td>
</tr>
<tr>
<td>Weight of one rail of a lock gate.</td>
<td>1 ton</td>
</tr>
<tr>
<td>Original tree species used to build lock gates.</td>
<td>Oak</td>
</tr>
<tr>
<td>Stone mostly used in construction</td>
<td>Limestone and some</td>
</tr>
<tr>
<td>Sandstone of lock walls.</td>
<td>Tradesmen who sculpted and worked stone for the locks.</td>
</tr>
<tr>
<td>-------------------------------------------------------</td>
<td>-------------------------------------------------------</td>
</tr>
<tr>
<td>Tradesman who works with iron.</td>
<td></td>
</tr>
<tr>
<td>Long narrow windows found on outside walls of a blockhouse.</td>
<td></td>
</tr>
<tr>
<td>A gate opening and closing mechanism consisting of chains running down the wall and across the lock floor.</td>
<td></td>
</tr>
<tr>
<td>The force which causes water to flow into and out of the lock.</td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>Answer</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>A privately built venture by enterprising Perth settlers.</td>
<td>Tay Canal</td>
</tr>
<tr>
<td>Door of a lock.</td>
<td>Gate</td>
</tr>
<tr>
<td>In the mid 1960’s the Department of Transportation wanted to change the locks to be _________________.</td>
<td>Electrically operated</td>
</tr>
<tr>
<td>Material used for primitive stone blasting.</td>
<td>Blackpowder</td>
</tr>
<tr>
<td>Three tools used by a stonemason.</td>
<td>Chisel, pick, point bushhammer, feathers, plugs or hand drill.</td>
</tr>
<tr>
<td>Type of lock operation at Newboro, Smiths Falls and Black Rapids.</td>
<td>Hydraulic</td>
</tr>
<tr>
<td>Description</td>
<td>Answer</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------</td>
<td>---------</td>
</tr>
<tr>
<td>Length(time) of an average lockage.</td>
<td>15-20 minutes</td>
</tr>
<tr>
<td>Total number of LOCKS on Rideau Canal.</td>
<td>47</td>
</tr>
<tr>
<td>Name applied to 2 or more locks in a row. (eg. Jones Falls)</td>
<td>Flight</td>
</tr>
</tbody>
</table>
Guided Tours on the Rideau Canal

Introduction

The Rideau canal has opened for navigation every year since 1832. In North America, it is the canal that has the longest history of seasonal navigation. It was built during the Great Canal Building era of the 19th century; it has survived intact to modern times, and will continue well into the future. Under the management of Parks Canada, it will be preserved as a national historic site and as an operating canal.

Rideau Canal Diversity

To visit the Rideau Canal is to study the natural environment and the history of this part of Canada. A 19th century canal is not just a transportation route nor is it simply a collection of locks and dams. It is the embodiment of the development of an area. The Rideau Canal was built in a wilderness where technology was unknown. The transportation route and the source of water power created by the arrival of the canal led to immigration, to settlement, and to the development of various industries such as farming, milling and forwarding. Then electrical power replaces water power and railways and roads replace canals for commercial traffic. Now at the end of the 19th century leisure is important in our Canadian lifestyle. The canal becomes an important recreation area with fishing resorts, and luxury steamers plying its waters. Today, the Rideau Canal is enjoyed by residents and visitors alike. It is important to the tourist industry. It offers the natural beauty of the countryside. It is a reflection of the history of Eastern Ontario. It provides a variety of recreation opportunity both on the water and on land.

Unique Learning Opportunity

Canada is a vast land. It is made of many different cultures and many landscapes. The study of the Rideau Canal is the study of one part of the development of Canada from the 19th century through the 20th century and into the 21st.

In addition to this kit, the Rideau Canal offers guided tours at several locations in the corridor. These programmes are designed to teach the student about the Rideau Canal while making the connections to the people, the history and the landscapes of Canada.

Each of these tours will explore the human and natural history of the Rideau Canal. However, no two tours will be exactly alike.

• The tours will be tailored to your group’s interest, age and enthusiasm. There are different themes to the tours at the different lockstations. The themes are based on the resources found at the site.
• All tours (except Canoe Trails) will discuss canal operation and the locking procedure in detail.
A visit to Ottawa is like stepping back in time. This tour puts the students in touch with the environment, the engineering, the technologies and the people linked to the defence and development of the 19th-century Canada and the founding of our Nation’s Capital. Nestled between two nationally significant historic sites, the Parliament buildings and the Chateau Laurier, this magnificent flight of eight locks welcomes boaters and visitors to the northern entrance of the Rideau Canal. This is the site of the oldest stone building in Ottawa, The Royal Engineers’ Commissariat. Built in 1826, it now houses the Bytown Museum and the Canal Builders’ exhibit.

Using Ottawa Locks as a focal point you are in walking distance of several national points of interest.

**Industrial Heritage, Historic Community**  
**– Merrickville Lockstation**

Settled in 1793, by United Empire Loyalists, Merrickville is one of the oldest settlements in the canal corridor. It offers a glimpse of the changing lifestyles of the past two centuries. Here the students will learn about Canada’s 19th-century industrial heritage; its development near sources of water transportation and water power, and its decline in those communities which could not evolve with the times. Merrickville is a quaint historic community. Elegant stone cottages and buildings grace its streets and the surrounding country-side, as well as the largest of the Rideau Canal blockhouses which houses the Merrickville Blockhouse Museum. The lockstation is a unique configuration of three individual locks separated by turning basins. The past meets the present in the form of a modern swing bridge and a hydro electric generating station.

**Technology: Old and New**  
**– Smiths Falls Lockstation**

Smiths Falls is the heart of the Rideau. Here, the old and the new rest side by side for the contemplation of students. At Smiths Falls Combined, a new hydraulic lock (1972) with a lift of 7.9 metres has replaced the original three which are preserved for viewing and comparison. The tour concentrates on change: change in lifestyle, canal operation, building techniques and attitudes. The site showcases one of the 11 remaining defensible lockmaster’s houses. The changes that have taken place over the years to this building and the canal mirror

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**Guided Tours**

- The lockstation tours will be one to one and a half hours long.
- All tours are linked to the Ontario Common Curriculum.
- For reservation and logistical information refer to the reservation section.

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**Tours**

**Navigating from Colony to Capital**  
**– Ottawa Locks**

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the changes to the town of Smiths Falls moving from defence, to settlement, to commerce and finally tourism.

The Rideau Canal Museum offers the history of the entire Canal in a dynamic and interesting manner. Other attractions in the Smiths Falls area include a railway museum and a community museum.

**Engineering in the Wilderness**  
– Jones Falls Lockstation

In the depths of the 19th century Canadian wilderness, in the face of disease, and inhospitable terrain, Jones Falls Lockstation was built. Four locks with a combined lift of 18.2 metres and the largest dam of its time in North America stand as a tribute to the determination of the builders of the Rideau Canal. On this tour, the students will learn about engineering innovation and technology, preservation, risk-taking and life in another time. On the tour the group will visit an 1839 blacksmith shop complete with forge, tools and a working blacksmith as well as the home of the first lockmaster at Jones Falls, Peter Sweeney. This defensible lockmaster’s house has been restored and furnished to 1843 and mirrors the lifestyles of Upper Canada. No visit is complete without a visit to the Stone Arch Dam – 18.9 metres high and 109.7 metres long. If one stands at either end, a whisper can be heard across its face.

**The Past is Your Future**  
– Kingston Mills Lockstation

Kingston Mills is the southern gateway to the Rideau Canal. The past is linked to the future as defence, settlement, geography, commerce and the coming of the pleasure craft all have this lockstation as a common bond. Carved into the rock of the Frontenac Axis, Kingston Mills offers the natural beauty of the Canadian Shield. Here was located the first mill in Upper Canada in 1778. The blockhouse dates to the 1840’s and is restored and furnished to that period. Students learn about the life of the militia and can try on a uniform of the 4th Battalion of the Incorporated Militia of Upper Canada.

**Canoe Trails**  
– Smiths Falls Detached: The Swale  
– Beveridges: The Tay Marsh  
– Kingston Mills: The Cataraqui Marsh

Wetlands are a most important and misunderstood of the natural resources of the Rideau Canal. They are important for the plethora of wildlife they support, they act as natural filters of the water, they store water in times of drought and they contribute to flood abatement by acting as an overflow. The Rideau has the most significant stands of wetlands in Eastern Ontario and most of them have been created by the building of the Rideau Canal. Explore this rich natural environment at water level by canoe.

Half-day and full day tours are offered. A guide, canoes, paddles, and life jackets are all included.
**Information and Reservations**

**Name:** Rideau Canal

**Address:** 34A Beckwith St. S.  
Smiths Falls, Ontario  K7A 2A8

**Phone:** 1-800-230-0016

**Contact:** Tour Booking Officer

**Note:** Discover the past by taking a guided tour on the oldest continuously operating 19th century canal in North America. At Kingston Mills, Jones Falls, Smiths Falls Combined, Merrickville or Ottawa Lockstations explore a variety of learning and recreational opportunities for groups combining a blend of historic and natural environments. Watching boats pass through one or more locks, visiting small museums, restored heritage buildings and exhibits are all experiences to be enjoyed in a visit to the Rideau Canal.

**Hours:** Tours offered between 9:00 a.m. and 4:30 p.m.

**Tour Lengths:** One to one and a half hours

**Group Size:** Minimum 25   Maximum 88

**Complimentary Policy:** Bus driver, Group leader, Bus parking

**Reservation/Cancellation Policy:** A minimum of one week’s notice for group reservations and 48 hours notice of cancellation is requested.

**Season:** May to October

**Facilities for Disabled:** Yes, please inquire

**Driving Approach and Parking:** All lockstations are accessible by road with parking available to buses at most locations.
The following list includes organizations which are involved with environmental or heritage education. These organizations provide a range of educational programmes, and can be used as extensions for the various activity topics in Heritage Trails.

**Environmental Organizations**

1. **Bluebird Acres**  
   Westport, Ontario  
   (613) 273-5449  
   A private conservation farm with a guided nature tour showing various animal habitats. They also give in-school presentations.

2. **Britannia Canadian Power and Sail Squadrons**  
   Scarborough, Ontario  
   (800) 268-3579  
   Offers a course for 8-12 year olds called “Let’s Be Boatwise”, which prepares them for on-the-water emergencies in boating and other water sports. It has a companion video which has been distributed to school boards across Canada.

3. **Canadian Wildlife Federation**  
   Ottawa, Ontario  
   (800) 563-9453  
   Offers Habitat 2000, a kit of ideas for wildlife habitat improvement projects. They will provide funding for groups. They also produce Project Wild, an activity guide on the importance of wildlife, which includes a mandatory 6 hour workshop for teachers.

4. **Canadian Wildlife Service**  
   Ottawa, Ontario  
   (819) 997-1095  
   Offers a large selection of brochures on individual animal species called “Hinterland Who’s Who”.

5. **Cataraqui Conservation Authority**  
Glenburnie, Ontario  
(613)546-9965

Offers a range of outdoor nature programmes at the site, for K to Gr.6 and Gr.7-8, throughout the school year.

6. **Department of Fisheries and Oceans**  
Ottawa, Ontario  
(613)993-0999

Offers the “Yellow Fish Road”, a storm drain marking programme to warn people not to pour products down a sewer drain as it can harm aquatic life and water quality. Schools can participate in this project. Information on water pollution and warnings on what effect litter can have on animals in the water. A story called “A Fish Tale”, for children, which has a fish character named Dorsey narrate information about fish. Brochures on individual underwater species, and a fish habitat publication.

7. **Energy Educators of Ontario**  
Toronto, Ontario  
(416)323-9216

Offers an edukit called “Sustainable Energy Issues: An Integrated Grade 7 Unit of Study”. They also have study units for other grades. The study unit provides information on energy, with games, activities, fact sheets, etc.

8. **Ministry of the Environment**  
Toronto, Ontario  
(800)565-4923

Offers general publications on various environmental issues which promote responsible attitudes, and suggest certain activities. Topics such as environment protection, pollution, acid rain, recycling, etc.

9. **Ministry of Natural Resources**  
Carleton Place, Ontario  
(613)257-5735

Offers three programmes, all of which include teacher workshops and manuals. “Focus on Forests”, “Fishways”, and “Project Wild” all instill forest and wildlife management in students.
10. Ontario Federation of Anglers and Hunters
   Peterborough, Ontario
   (705)748-6324

   Offers “Habitat Is Where The Home Is”, and “FWSH” (Fresh Water Special Habitat) learning sessions with slides and learning centres. Travelling teachers go to the schools to present the science oriented programme for $320, plus GST, with the aim of instilling habitat conservation concerns. Brochures on wetlands, information on invading species (purple loosestrife and zebra mussels), a list of endangered species in Canada, project ideas for wildlife shelters, and habitat enhancement. They also sell a travelling trunk called “Zebra Mussels Mania Travelling Trunk” for $30. It displays exotic species of zebra on video and CD.

11. Rideau Environmental Action League
   Smiths Falls, Ontario
   (613)284-8380

   Offers an edukit on wetlands with information, activities, curriculum links, and slides.

12. Rideau Valley Conservation Authority
   Manotick, Ontario
   (613)692-3571

   Offers a package guide with nature activities and games, can be done at the site or at any open or forested area. At the site, they offer a tree identification trail, and animal track identification.

13. St. Lawrence Islands National Park
   Mallorytown, Ontario
   (613)923-1053

   Offers various programmes year round, both on site and in school. Subjects include natural history, native studies, geology, geography, history and archaeology.

14. Water Environment Protection Division
   Gloucester, Ontario
   (613)745-7165

   Offers a tour of the Robert O. Pickard Environmental Centre, a wastewater treatment plant. They send out a pre-visit kit, with information on water recycling and activities to promote awareness of what pollutes water.
Heritage Organizations

1. Agnes Etherington Art Centre  
   Kingston, Ontario  
   (613)545-2190  
   Offers various in-school programs for students in grades 1-4 and 5-8.

2. Bellevue House  
   Kingston, Ontario  
   (613)545-8666  
   Offers educational visits of the house where Sir John A. Macdonald lived in 1848. Included is a tour of the visitor centre with a video presentation on the history of the site, and an exhibit on the life of Sir John A. Macdonald. Information is available to teachers for use in school.

3. Billings Estate Museum  
   Ottawa, Ontario  
   (613)247-4830  
   Offers tours of the 1820’s estate including the house, outbuildings, cemetery and parkland. The story of the Billings family and area history are depicted. The museum also offers educational programmes such as “Pioneer Life”. A selection of outreach kits are available for loan to schools.

4. Bytown Museum  
   Ottawa, Ontario  
   (613)234-4570  
   Offers tours of the museum which has a collection of artifacts relating to the history of Bytown and Ottawa, and its founder, Lt. Col. John By. They also offer programmes on pioneer life, Lt. Col. John By in early Bytown, and logging in the Ottawa area.

5. Frontenac County Schools Museum  
   Kingston, Ontario  
   (613)544-9113  
   The museum offers a “General School Heritage Programme” for all grade levels, which covers a typical day in the turn of the century schoolroom. They also offer a Christmas Programme, which includes a discussion about Christmas celebrations and a concert. Enrichment programmes are also offered for elementary level.
6. **Heritage House Museum**  
Smiths Falls, Ontario  
(613)283-8560

Offer school tours of the 1860’s Victorian manor and special exhibits. They focus on pioneer life, which includes a video presentation and craft workshop. They also offer in-class presentations on pioneer life, spinning, dying wool and “then and now” artifacts.

7. **Kingston Archaeological Centre**  
Kingston, Ontario  
(613)542-3483

The centre has several kits developed on various native cultural aspects, archaeological techniques and finds which are geared towards Grade 5 to 7 primarily. They also offer in-house workshops and go out to schools for all grade levels.

8. **MacLachlan Woodworking Museum**  
Kingston, Ontario  
(613)542-0543

Offer a variety of educational programmes centering around the theme of “Wood in the Service of Humanity”, where students learn about the history of Eastern Ontario. Programmes (e.g., woodworking, blacksmithing, spinning and weaving, candlemaking, cabinet making, etc.) are based on the museum’s collection of artifacts, object-oriented learning and hands-on experience.

9. **Marine Museum of the Great Lakes/Pump House Steam Museum**  
Kingston, Ontario  
(613)542-2261

The Marine Museum offers tours of its 3 sites (Marine Museum, Museum Ship “Alexander Henry” and Pump House Steam Museum) and an overnight programme on the ship through “History Comes Alive”. Programme topics include the Great Lakes, shipwrecks/diving, shipbuilding, and shipping on the Saint Lawrence Seaway. The Museum’s most recent programmes target Grades 4-6 (but are open to others as well) and relate to the new Ontario Curriculum: “Paddle to Propeller: Water Transportation Montreal to Toronto, 1673 to present” and “Gear Up: Forces in Motion”.

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**Organizations**
10. Merrickville Blockhouse Museum  
Merrickville, Ontario  
(613)269-3614  
Offer tours of the blockhouse, including the history of the building and the social history of the Merrickville community in the 19th and early 20th centuries.

11. Nepean Museum  
Nepean, Ontario  
(613)723-7936  
Offers tours of the museum, and various programmes and activities including candle making, ice cream making, Christmas and March break workshops. They have outreach kits to send to schools: What’s It? kit which includes 15 artifacts to identify, and Make Your Own Ice Cream. The museum also offers travelling displays: Contrast photos from two different families, one with and one without captioning; a collection of 20 photographs of people and places past, and what’s it artifacts with anecdotal captions.

12. Pinhey’s Point “Horaceville”  
Kanata, Ontario  
(613)592-4281  
Offers school tours of the grounds and buildings which date back to the early 1800’s. They have an Archaeological Workshop for students from ages 10 to 14 years. Exhibits on school days in the 1800’s, and steamboats on the Ottawa River. They are open seasonally and by special request otherwise.

13. Rideau Canal Museum  
Smiths Falls, Ontario  
(613)284-0505  
Offers a tour of the museum focusing on the history of the Rideau Canal and the career of Lt. Col. John By. The tour includes computer stations with games, quizzes, and information, mini-theatres with short videos of various canal subjects, and special exhibits.

14. Rideau District Museum  
Westport, Ontario  
(613)273-5449  
An 1850’s blacksmith and carriage shop with a variety of artifacts reflecting the history and people in Westport region’s past.
Bibliography

The following is a list of books, reports and publications relating to the Rideau Canal which educators may find useful for further background information. These resources may also be of interest to students for use in research and classroom projects or assignments.

The resources published by Parks Canada are available at the Rideau Canal Office in Smiths Falls; Parks Canada, Ontario Region Office, Cornwall; and Parks Canada Library, Terrasses de la Chaudiere, Hull, Quebec. The published books can be found in local libraries as well. The resources which have an asterisk are most likely to be found only at the Rideau Canal Office in Smiths Falls, and are available for loan at the following address:

Rideau Canal
Tel: (613)283-5170
34A Beckwith St. S., Smiths Falls, Ontario K7A 2A8

Barker, Edward J. *  
Observations on the Rideau Canal  
Kingston, British Whig, 1834

A xerox copy of an 1830’s book in which the author summarizes the construction of the Rideau Canal, and gives a description of the lockstations and towns along the canal route.

Bush, Edward F.  
The Builders of the Rideau Canal, 1826-1832 (Manuscript Report Series 185)  
Parks Canada, 1976

A manuscript report issued by Parks Canada on the men, both soldiers and civilians, who participated in the construction of the Rideau Canal. Accounts on Col. John By, Royal Engineers, contractors, and Royal Sappers and Miners are included. A number of sketches and records support the study.

Gordanier, Deborah A.  
Rideau Heritage  
Inverary, Rideau Prints, 1982

This small general history of the Rideau Canal has several illustrations in both colour and black and white. It also reports on the Rideau milling tradition.

Gray, Doug  
The Rideau Navigator: Going Down the River, Not Up the Creek  
Burnstown, General Store Publishing House Inc., 1993

A cruising guide for boaters along the Rideau Canal system, which involves planning stages, preparing for the trip, navigating the canal system, locking through, emergencies, and other considerations for a boat trip.
Hind, Edith, ed. *  
**Bytown to Kingston, 1830, Excerpts**  
Remarks to Ottawa Historical Society, 1959  
A detailed narration of a trip made by Dr. Christie in 1830 from Bytown (early Ottawa) to Kingston. Excerpts of remarks on the people and places encountered on the trip are included.

Legget, Robert F.  
**John By: Builder of the Rideau Canal, Founder of Ottawa**  
Historical Society of Ottawa, 1982  
This concise biography about John By, builder of the Rideau Canal, is a good source for information on the man’s life and engineering works.

Legget, Robert F.  
**Rideau Waterway**  
One of the most popular books about the Rideau Canal which gives a very informative, accessible description of the canal’s history. It has illustrations and photos to accompany the text and also serves as a guide to places of interest along the waterway.

MacTaggart, John*  
**Three Years in Canada: Rideau Canal**  
London, Henry Colburn, 1829  
A xerox copy of a book written by John MacTaggart who was the Clerk of Works during the construction of the Rideau Canal. He gives an exaggerated but entertaining report on the state of Upper Canada and the building of the canal in the 1820’s.

Moon, Robert, ed.  
**Col. By’s Friends Stood Up**  
Ottawa, Crocus House, 1979  
This small book has reprints of official documents and letters relating to the contention between Col. John By and the British government over the expense of building the Rideau Canal.

Moore, D. Jane  
**Rideau Passages**  
Cloyne, Mapleware Pub., 1982  
An engaging, illustrated book on the history of cottage living and recreational activities on Big Rideau Lake. It also provides information on early settlement of the area resulting from the completion of the Rideau Canal.

Passfield, Robert W.  
**Building the Rideau Canal: A Pictorial History**  
Toronto, Fitzhenry and Whiteside in association with Parks Canada, 1982  
This is a thorough study of the construction of the Rideau Canal, with colour illustrations by period military artists and engineers. Available in English and French.
Passfield, Robert W.
Historic Bridges on the Rideau Waterways System: A Preliminary Report (Manuscript Report Series 212)
Parks Canada, 1976

A manuscript report issued by Parks Canada which locates and identifies bridges of historic interest on the Rideau Canal system. A history and description of each structure and its location is given.

Price, Karen
Construction History of the Rideau Canal (Manuscript Report Series 193)
Parks Canada, 1976

Parks Canada issued this manuscript report with details of the various aspects of the canal’s construction between 1826 and 1832. It is comprised of excerpts from contracts and documents by those people who were involved in the construction of each locksite.

Sweeney, Peter*
Personal Journal of Peter Sweeney 1839-1850

A xerox copy of the daily journal written by Jones Falls’ lockmaster, Peter Sweeney. It gives an absorbing glimpse into the life of a lockmaster and his family on the Rideau Canal in the mid 1800’s.

Swift, James and Co.*
The Picturesque Rideau Route
Toronto, Lawson and Wilson, Bookbinders, 1898

A xerox copy of a late 1800’s description of the Rideau Canal and points of interest to tourists. It includes interesting illustrations and advertisements of places along the canal corridor in the 1890’s.

Ten Cate, Adrian G., ed. and Mary Beacock Fryer
The Rideau: A Pictorial History of the Waterway
Brockville, Besancourt Publishers, 1981

One of the best sources for the general history of the canal, this book has many photos, illustrations and appealing anecdotes for the reader to enjoy.

Tulloch, Judith
The Rideau Canal: Defence, Transport and Recreation
Parks Canada, 1981

This is a Parks Canada study on the management of the canal from its completion in 1832 to 1914, with photos and illustrations. Areas covered are water control, changes to the physical structures of the waterway, employment on the Rideau, and the commercial and recreational eras on the canal. Available in English and French.
Warren, Susan*
Operation and Maintenance History of the Rideau Canal
A.D. Revill Associates, 1984

A compilation of transcripted interviews with lockstaff relating their job experiences on the canal during the early 1900's up to the 1980's. They discuss various happenings on the Rideau Canal such as daily and seasonal routines, salaries, maintenance, and uniforms.

Wylie, William N.T.*
Lockmaster on the Rideau: The Life of Peter Sweeney at Jones Falls, 1839-50
Parks Canada, 1980

This brief report is a summary of the life and works of Peter Sweeney, who was lockmaster at Jones Falls in the 1800's.

Wylie, William N.T.*
Transcience and Poverty: A Study of the Rideau Canal Construction Workers, 1826-32
Parks Canada, 1980

A short study on the large work force of British, French Canadian, and Irish immigrant workers who were employed on the Rideau Canal during its construction. It contains an overview of the harsh, exhausting and dangerous conditions these labourers had to experience.
Heritage Trails Comments Sheet

Name of Reviewer ____________________________________________

School Board __________________________________________________________

School _________________________________________________________________

Grade Level ____________________________________________________________

Please complete the following questions:

1. Does Heritage Trails complement your curriculum?

2. Does it provide you with adequate background information to complete the activities and games?

3. What did you like the most?

4. Please provide any suggestions for improvements.

General comments and suggestions.

Please return to: Rideau Canal Office
34a Beckwith St. S.
Smiths Falls, Ontario  K7A 2A8

Fax: (613) 283-0677
Tel: (613) 283-5170
Heritage Trails: Exploring The Rideau Canal

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**Bartering on the Rideau…**

**Setting:** A blacksmith, John Black, is playing a harmonica and singing to himself. His blacksmith shop is in the countryside outside Burritts Rapids, in the 1840’s. He sits down to eat his lunch. He calls out to his wife:

John: This is the last piece of bread and there is no flour to make any more. *(He proceeds to go back to work - shows tools and objects that he has made. He notices a woman in the distance, pushing a wheelbarrow. As she approaches he realizes that the wheelbarrow has bags of flour in it. He begins to barter for a bag of flour.)*

Good afternoon Madam, how are you today? It is very hot out, and you must be exhausted from pushing that wheelbarrow. Would you care for a drink of water?

Lady: *(She wipes sweat from her brow with a handkerchief.)* This is one of the hottest days of the year and to make things worse, I had to wait in the sweltering heat for the bridge in Burritts Rapids to close because there was a large boat passing through today. I have travelled more than 6 miles through woods, all this way on nothing more than a trail cut through the forest.

John: Where are you going with those bags of flour?

Lady: I am just returning from Burritts Rapids where I had the grain ground into flour. My husband is in the bush all day and has no time to get into the village for supplies.

John: Would you have a bag or even a portion of a bag of flour to sell? *(He opens a bag of flour and sifts it through his hands.)*

Lady: Not today! This flour has to last us until the fall crop of wheat is ready. One of these bags belongs to a neighbour, who has already paid for it.

John: My family has absolutely no flour. We have used it all.

Lady: I wish I could help you sir, but I just cannot spare any flour at all. It was a hard winter for everyone.

John: *(As he approaches his shop)* Would you be interested in some of my fine quality jewellery?

Lady: My, but it is lovely! *(She picks it up from the blacksmith’s hand and places it on her wrist.)*

John: Or would you be interested in some of my fine quality tools? *(He picks up a hammer and demonstrates hammering a nail. He allows her to look everything over, and slyly steals a bag of flour.)*

Lady: To tell you the truth, my husband said that the head of his hammer is getting worn down and rounded, and some of the metal is chipping off.

John: Since you seem to be interested in some of my useful tools and fine jewellery, would you be interested in trading a bag of your flour for some of my goods?
Lady: I cannot sir! I would be giving you much too much flour for just a hammer and a bracelet!

John: Well, perhaps I could interest you in an iron or a griddle?

Lady: That seems more reasonable. I think we are both coming to an acceptable agreement. May I take a look at your griddle? (She picks up the griddle and bangs it off the table.)

John: That is made out of the finest iron available in Montague Township. I supplied the builders of the canal with such griddles. Of the 200 supplied, only 20 were not good. However, I guarantee my work, and was happy to replace or repair any of the griddles.

Lady: I would say so myself, this one is good and heavy. (She lifts the griddle once again.)

John: So do we have an agreement?

Lady: Well... (pauses, thinking hard) yes, it is a deal!

John: (He goes over to the wheelbarrow and takes out 1 bag of flour and brings it over to his workshop.) These bags must be close to 60 pounds!

Lady: Yes, they are 65 pounds each to be exact. (She picks up the bracelet, hammer, and griddle and places them in the wheelbarrow.) I thought I had 3 small bags of flour! (looks around) Could I have dropped one along the way? (She looks over to the blacksmith and sizes him up.)

John: It has been a pleasure doing business with you madam. The flour is greatly appreciated.

Lady: Yes, but, could you throw in a couple pounds of nails with that?

John: Why certainly madam! (He grabs the nails quickly and throws them in the wheelbarrow. The lady picks up her wheelbarrow and is on her way.) Well, you had better be off or your husband will worry about you. Have a safe trip home and be careful of the cedar swamp!
A Settling Affair…

Setting: In the 1840’s two women who have settled along the Rideau Canal are picking berries. Sarah and Amanda come into view with baskets in their hands. Sarah has a musket and she rests it against a tree.

Sarah: Oh, I am so looking forward to Patrick’s return. These big, fat, juicy berries will make a lovely pie for his return meal. (She picks berries and puts them in her basket.)

Amanda: Well, I’ll agree that these are lovely berries, but I’d just as soon not be making a bunch of pies. I have enough work to do out in this uncivilized bush we now call home. When Peter is here, he only gives me more headaches, wanting a dessert with every meal! (She pops a couple of berries in her mouth.)

Sarah: Oh, but don’t you think our menfolk deserve a little pampering? After all, they did help to build the Rideau Canal. Why, they nearly broke their backs, what with working from sun up until sun down, excavating the limestone to put in the locks. Now, they are so busy out in the bush, cutting down all those big trees.

Amanda: I just don’t see why we had to come here in the first place. I was very content back in Yorktown, where one could live in a decent manner. You must admit that we hardly have the few amenities for even a bearable existence.

Sarah: It is not so bad. Why just think of the beautiful sunsets, the refreshing air, the joys of living side by side with nature. (Meanwhile, Amanda trips over the musket that Sarah set aside the tree. She picks it up and holds it towards Sarah.)

Amanda: Joys of nature, huh!? If it is so enjoyable, then why do you insist on bringing this blasted musket everywhere you go, ready to shoot at anything that moves!?

Sarah: (She takes the musket from Amanda, and sets it close to her side again.) Why, it is just a security precaution. Not all the animals are friendly. What happens if a bear, or worse yet, a skunk comes along? Seeing how you are not fond of animals, I don’t know why you are complaining.

Amanda: I’ll tell you why I am complaining Sarah Elizabeth Johnson! The last time you thought you saw a bear, it just happened to be myself! I was only coming to pay my good friend a visit, and what did you do? You nearly shot my ear off, that’s what you did! My poor ears are still ringing from that privileged experience.

Sarah: Well, uhh, you shouldn’t come creeping up on a person from behind the bushes. Even though the completion of the Rideau Canal has encouraged settlement in this area, it is still necessary for a lady to protect herself. After all, you never know when a lynx could come roaring out of the forest.
Amanda: That is just one more reason why I must have lost my good sense to allow Peter to bring me here. He told me it would be a perfect opportunity to start a new and prosperous life. He would leave me all alone for days on end out here while he went off with your husband to work, so he said. I know that he was out drinking his pay away, along with your husband, I’m sure. Here I am, and after 10 years, I still don’t have a neighbour less than 2 miles away. It’s a lonely, monotonous lifestyle, I can assure you. I can only imagine what Peter is up to, but I’m positive it is no good.

Sarah: I do not appreciate your talking about my husband that way. My Patrick has always brought home his full pay. He is a good, honest, hard-working man. He’s certainly not out drinking with your husband. He writes to me almost every day, telling me how tired he is from working so hard, but that it is all worth the effort since it allows us to keep our farm going.

Amanda: Farm, what farm!? All you have is a couple of scrawny chickens, a fat pig, and an old cow!

Sarah: And a vegetable garden!

Amanda: Oh Sarah, that certainly does not make for a farm! Why. (She stops as something makes a rustling sound in the bushes.) Did you hear that? 

Sarah: Oh my goodness, I’ll get the musket! (She picks up the musket, aims towards the bushes and shoots.)

Patrick: (Sarah’s husband comes staggering out of the bushes, holding his hat which has a big hole through it.) Dear God, woman! Look what you have done to my favourite hat, not to mention what you nearly did to my person! That’s it, I will take that darned musket of yours! (He grabs the musket from Sarah’s hands and stumps back towards the bushes.)

Sarah: (She follows after him.) Oh Patrick, you’re home! I’m so happy to see you, but you just cannot take my musket away. I need it for protection.

Amanda: I knew something like this would happen. (She follows after them, shaking her head and chuckling.)
The Happy Couple…

Setting: A couple in 1846. The man, Francois Leduc, works at Ottawa Locks as a lock operator. His dream is to become Lockmaster of the station. Delphine Leduc, his wife, is the mother of 8 children, with another on the way. Their home is a very mediocre house near the lockstation. Mme. Leduc is at home. Around her we can see a broom, a table, a bowl, and a lantern.

Delphine: (She is sweeping the floor with her broom.) I have had enough of all this sweeping and meal preparation for the children. (She sees her son through the kitchen window. He is sneaking around in the garden.) Jean-Philippe! You put that carrot back in the garden this minute! What did I ever do to deserve such a child. He is a walking menace.

Just look at this house. We don’t even own drapes, and on top of that, my Francois had to burn the last 2 chairs we owned to heat this house. (She pauses and then continues to sweep the floor, but a bit more vigorously. She stops, leaning on her broom.) I wonder where my Francois is right now. I remember when I was a young girl and I met my handsome husband.

It was love at first sight. My wedding day was the most beautiful day of my life. (Her tone of voice changes to a less dreamy one.) It was the only beautiful day of my life. That’s not the case any longer. Now I sweep and clean and cook until I drop.

Francois: Allo mon amour!

Delphine: Welcome home my ever so absent husband. What have you been doing? Did you get lost, you’re hours late!

Francois: You know that I know this part of the Rideau Canal like the back of my hand. Besides, how could I get lost, we live right in front of the lockstation!

Delphine: Well the children and I were waiting for you before sitting down to supper. Since you did not arrive, we ate without you. You know just as well as I do that a flock of 8 hungry mouths won’t wait. Are you listening to me Francois?

Francois: Oui, oui. I am just so distracted by your beauty that I cannot concentrate on what is coming out of your lips.

Delphine: I am not in the mood for your devoted act tonight. You know exactly what I mean. Look into my eyes and tell me the truth. Where have you been?

Francois: Why, at the lockstation of course!

Delphine: Oh! I suppose that you purposely put in extra hours so you could sneak a peak at that rich Colonel’s wife.

Francois: What a nasty thought coming from such a sweet head!

Delphine: Well, for my own peace of mind, I would rather not imagine the worst. Oh, I wonder what else you could have been doing? (in an ironic tone of voice)
Francois: Mon amour, come into my arms! Today, your wish is my command.

Delphine: (She pushes him away. She is getting very impatient.) What happened during these past 3 hours?

Francois: Oh, it is quite simple. A big incident occurred at the lockstation, and I had to empty the lock chambers all by myself! Let me tell you, it was not a pleasant sight.

Delphine: Oh, my poor Francois! You had to do it all by yourself? Well, while you were suffering so, I did the cleaning, replanted all the carrots that your son keeps stealing from the garden, survived Mrs. Robinson and her bellyaching for most of the afternoon, and finally fed our 8 little angels... all by myself!

Francois: Is the full moon responsible for your hot temper today? Anyhow, from now on our troubles are over. Tonight we celebrate!

Delphine: Have you lost your mind, Francois?

Francois: Of course not, my sweet and lovely wife. Look at what I have in my pouch, is it not a nice, fat chicken?

Delphine: Aha, you were out gambling again?

Francois: Not at all. In that incident this afternoon, Lockmaster Brown tripped over the chain, fell into one of the lock chambers and finally went through the sluice tunnel. It is a blessing in disguise because this afternoon I was appointed the new Lockmaster of Ottawa Locks! All our dreams will finally come true, mon amour!

Delphine: Oh, Francois! You bring me such good news! I will go and buy flowers for poor Mrs. Brown. While I am there, why not buy some drapes!

Francois: Now don't pinch your pennies, go for the more expensive ones. We can afford it now that I am the new Lockmaster. Well, I have to get back to the lockstation now.

Delphine: What do you mean?

Francois: Now that I am the new Lockmaster, I will be working tonight and tomorrow morning. Au revoir mon amour, I will see you tomorrow at noon, I hope. (He exits.)

Delphine: Francois! Francois, you come back right this minute! (Spots her son through the window again.) Jean-Philippe, you put those carrots back into the garden! Francois! Francois! Here I am left alone again to do all this housework. (She goes back to her sweeping.)
A Disagreeable Exchange…

Setting: The year is 1849 at Jones Falls Lockstation. The blacksmith, Henry Flogged, is working in his shop as the lockmaster’s wife, Catherine Sweeney, comes in to see him. Henry is not feeling very well as he has been in Kingston for three days with Peter Sweeney, where they indulged in too much ale. Catherine is not impressed:

Henry: Oh, my aching head! What was I thinking of allowing that Peter Sweeney to talk me into going with him to Kingston. Here I have all this work to do. These locks are in constant need of repair. My poor head just can’t bear this!

Cath: (Coming from the bushes) Henry Flogged!

Henry: (With a moan) Oh no, not her!

Cath: Henry Flogged! I have words to say to you!

Henry: Mrs. Sweeney! What a pleasure it is to see you.

Cath: Don’t you “Oh, Mrs. Sweeney” me! I want answers from you, and I want them now!

Henry: Ugg! A little quieter please. I’m feeling bad with my head. It must be a touch of that ague that’s been going around.

Cath: Ha! Do you really think I’m so daft as to fall for such a lame excuse for your aching head. It is the consumption of liquor that has brought on your sudden illness, and nothing else. I also know you’ve been out gallivanting around with that rotten, scoundrel husband of mine. “I’m going to purchase a horse.” he said. That was three days ago, so where is he!

Henry: Why, I have no idea! How should I know where your husband is?

Cath: Don’t play the innocent with me. It won’t work. I have just come from speaking with your wife, and she told me Peter called upon you on Monday, and neither of you have been seen since!

Henry: Well, it is true that we went into Kingston to look at some horses. We just stopped for a short while to discuss which horse would best suit Peter’s purpose and ...(long pause) when we awoke yesterday afternoon, we thought better of returning home just then.

Cath: So, you have returned, then where is my husband?

Henry: Uh, he left me saying he must either find the horse or his money, or he might as well not even return home.

Cath: He had better not come home with empty hands. If he thought he wasn’t feeling well yesterday afternoon, just wait until I get a hold of him! I knew he’d be up to no good, especially in your misdirecting company.
Henry: Madame, I take offence to you saying my misdirecting company. It was your husband who dragged me into the tavern for a few cups of whiskey. Well, I have returned so I’m quite certain Peter will return... after a day or two.

Cath: Hmph, I’ll take care of him when he gets back. Meanwhile, I want you to make me that chandelier I’ve been telling you need for the dining parlour. There’s not enough light in there, and as I’m having company for dinner tomorrow evening, I’ll need it by the end of the day.

Henry: Today, that won’t be possible. I am behind as it is, and I haven’t even begun to repair the sluice crank for the top lock. I’ll need at least a couple of days before I can get to your chandelier.

Cath: A couple of days! That is not acceptable. I want it done by tomorrow morning at the latest.

Henry: I’m sorry, but tomorrow morning I’ll have to finish up repairs for Newboro and Davis Locks. Your husband has ordered me to do so, and he is the lockmaster after all.

Cath: Well, I am the lockmaster’s wife, and I need that chandelier done by tomorrow and that’s all there is to say. I trust that it will be done, or shall I visit your wife again and inform her of your return?

Henry: Well now that won’t be necessary. (under his breath) I don’t need two women nit-picking at me. (in a clear voice) I’ll see what I can do about accommodating you Mrs. Sweeney.

Cath: I thought you would see things my way. I will be back tomorrow, Mr. Flogged. If you see my wayward husband tell him he’d better come home without further delay. Good day. (Catherine exits.)

Henry: What an unfortunate man, that Peter. It’s no wonder he takes to his cups now and then, what with such a disagreeable wife to live with.

Henry’s wife calls from the bushes “Henry!” in quite a disagreeable tone. Henry groans and shakes his head in despair, saying “Yes dear” as he goes off into the bushes.
The Farewell…

Setting: In 1867, a widow husband visits his wife Anne’s grave. He has flowers in his hand, and sets them down on the grave.

Joseph: Hello Anne. Here are your favourite flowers. Well, it has been over six years since that tragic day in March, 1861. Who could have known that the mill that was to be our future has separated us forever! I had looked so forward to showing it to you. I will never forgive myself for not being more careful. I should have known that a woman with a long dress should not have been walking around a mill! We had only been married for less than two months.

Anne: (She appears in a puff of fog, but he cannot see her as she is a ghost.) Joseph, Joseph, oh Joseph dear, it truly is flattering to see how much you miss me. I’d miss me too, I was such a young, beautiful bride… and such a gruesome, terrible accident. But it was over six years ago. It is time to move on. You have such a bright future ahead of you. It is a shame though my dear, that you sold your half of the mill in Manotick. It was the dream you shared with your partner, Moss Kent Dickinson, of encouraging settlement along the Rideau Canal with a milling complex. Well, it will all come true, but since you sold your rights to the mill after my tragic death… well, Mr. Dickinson will be lauded as Manotick’s founder! Such a shame!

Joseph: (He is unaware of Anne’s presence and cannot hear her speak.) Yes, Anne, I am not a young man any longer. It has been thirty years since I moved to the Ottawa Valley to set up my business. It’s been many years since I realized the potential of harnessing the water power at Rideau Falls and using the Rideau Canal to forward my milled lumber to rich markets in the United States. My foundry too has benefitted by using the canal as our economical shipping link to local communities.

Anne: Oh Joseph, dear Joseph… I know you miss me. What’s not to miss? You must pick yourself up and move on! After all, you are an extremely successful businessman in Ottawa, the new Dominion’s capital city! In your near future I know that you will be a member of parliament and an alderman for Ottawa. Furthermore, the future home you will build for yourself at 24 Sussex Drive will later become the official residence of the Prime Minister of Canada! Ah, if only I had lived to see the day!

Ah yes, the future! My dear husband, so much will change. The Rideau Canal, which enabled you to launch such a successful business career, a source of water power and commercial ventures, will shortly turn into a recreational waterway supporting luxury cruisers and their passengers. Oh how I wish we could have shared a romantic cruise together!
Joseph: Oh Anne, perhaps I should never have severed my partnership with Moss Kent Dickinson. We established such a beautiful mill, one that will last for ages. But every time I think of it, I remember you, spinning round and round with that shaft, and then thud! Can I ever forget that sound? It returns to haunt me in my dreams.

Anne: *(She spins round and round while she talks.)* Yes, yes, I know, round and round, thud. This is becoming tiring Joseph. Stand up tall and take pride in your accomplishments! Do you realize that the mill you helped establish will be one of the last surviving, functioning mills along the Rideau Canal? It will attract visitors for more than a hundred years!

Joseph: *(His mood lightens a little.)* Yes the mill, fully automated with the latest water turbines. Even though it was built to last for ages, I must leave it now. Yes, I must get on with the rest of my life. I must stop doting on you too, Anne. I cannot go on reliving this nightmare forever. I believe my future lies in Ottawa. Canada awaits! Businessmen such as myself face many new opportunities. I will need a new partner in life now. I cannot remain a recluse forever. Farewell, my love. *(He leaves with a new bounce in his step.)*

Anne: Oh, so you really are leaving me. You don't miss me anymore? Drats! Being a ghost is such a bother. I guess it's back to the mill for me. *(to the audience)* And for those of you who happen upon the grisly scene of my death, beware, perhaps you shall see and hear me! *(A puff of fog and lights out, she disappears.)*
A Cold Spell…

Setting: In the 1890’s, Eleanor and Albert are lost in the forest and frozen in time. Their spirits have not realized that they are dead and they are condemned to relive the same episode over and over, rehashing their crimes and their ultimate punishment. They are a brother and sister team, born on the Rideau of settlers, and spoiled rotten. Their hobbies involve cons on the local tourists.

Eleanor: (She is shivering and trying to warm herself with her hands and arms.) Are we almost home yet, dear brother?

 Albert: (He is doing the same.) I’m sure it’s just around this bend.

Eleanor: But we’ve been around this bend before… I think.

Albert: You’re just letting the cold get to you. After spending your life on the canal you ought to be used to it.

Eleanor: Mother and Father say it seemed even colder when they were children, shortly before the Rebellion.

Albert: Thank God, we weren’t around when things were so uncivilized.

Eleanor: I know what you mean, only insects and wild animals to keep you company.

Albert: And no wealthy tourists to prey upon. Speaking of prey, when are you going to wed that hotel operator you claim to have wrapped around your little finger, Eleanor?

Eleanor: Well, at the moment some other woman is wearing his engagement ring around her finger, but that will shortly be altered. (They continue to walk around, stopping to pause every few minutes.)

Albert: What has my sister’s devious little mind prepared now?

Eleanor: Oh, just the usual charm.

Albert: About as charming as this Canadian winter.

Eleanor: This cold spell does seem to be lasting forever… and haven’t we been here before?

Albert: I don’t know anymore, everything is so white. I wish this winter would end so that the steamboat cruises may begin again, and the resorts reopen. (He pulls a pocket watch from his trouser pocket.) My pockets are beginning to be a little dry and my diamond-studded pocket watch collection needs another addition.

Eleanor: Is that all you can think about, petty theft? You should start thinking bigger, like me. With all those tourists coming to the Rideau Canal from New York and Montreal, I would think that your tastes might have been refined. You have yet to find your way onto the “Rideau Belle” and mingle with the well-to-do as I have.

Albert: Don’t you worry dear sister, I do have bigger plans and they involve leaving this country and its climate and every discomfort that Mother and Father could never eliminate.
Eleanor: They did try though, those poor wretched fools.

Albert: I wonder how one survived when there wasn't all this lucrative activity on the canal. Imagine fitting horses with shoes all day long, how uncivilized.

Eleanor: That has become the greatest thorn to my marrying a suitably rich man, Mother and Father's inability to provide a respectable dowry.

Albert: Well my days of relying on others for income will soon be over.

Eleanor: What have you concocted, Albert? Oh, please let me in on it.

Albert: No, dear sister, I'm afraid this one is going to be too delicate to allow your indiscreet and frail nature to jeopardize this particular business venture.

Eleanor: This insult is uncalled for. I was more than capable in the Opinicon Lounge the night you made your latest acquisition.

Albert: I'm afraid that hands are going to get dirty on this one and... you have always cringed at the sight of blood.

Eleanor: If I wasn't so cold I would debate that issue with you, but I am suddenly feeling very tired and confused.

Albert: I feel it too and you do look pale as a ghost.

Eleanor: Are we almost home yet, dear brother?

Albert: I'm sure it's just around this bend... (They walk off.)
Oliver’s Ferry…

In the days before the Rideau Canal was built, a new road was established between the towns of Brockville and Perth. Where the road crossed a narrow portion of Rideau Lake a man named Mr. Oliver set up a ferry to get people across the water. It became known, naturally, as Oliver’s Ferry. With the passage of time, the canal was built, towns sprang up and Oliver’s Ferry became even more important. It proved to be a very lucrative business as Mr. Oliver built additions on his home every few years until he had a very large and beautiful home.

Mr. Oliver did, however, have one very unusual quirk. He would refuse to take travellers across to the far side after dark, preferring to put them up in his house overnight and send them on their way at first light in the morning. Those travellers arriving on the far side at night would be brought across and put up for night since there were no inns nearby and the roads were considered dangerous at night. Funny thing though… Mr. Oliver’s neighbours seldom saw the travellers in the morning. When asked about them, Mr. Oliver would simply say “They went on their way at first light. You must have been asleep”. One strange thing kept happening though. Most of the travellers who had stayed overnight did not arrive at their destination... victims, probably, of murderous highway robbers.

Eventually, Mr. Oliver retired and moved away and others operated the ferry. It became known then as Rideau Ferry. With time, however, increased traffic and the road demanded that a bridge replace the ferry. When the bridge was built, they had to tear down Mr. Oliver’s beautiful home to make room... and they made a grisly discovery. In the walls of the additions and under the floorboards, they found human skeletons. It appears that Mr. Oliver was murdering those late night travellers for their money and literally “putting them up in his house”… for more than just the night.
The Mill…

In 1858, the town of Manotick (near Ottawa) did not exist, but two gentlemen, by the name of Joseph Currier and Moss Kent Dickinson, established a mill that year. It eventually led to the development of the town. In the beginning, Joseph Currier looked after the mill and Moss Kent Dickinson looked after the forwarding trade.

Joseph Currier was an astute businessman and was very dedicated to his business, so much so that he excluded all else from his life. He cared a great deal about his business and about the people who worked for him. He was well liked by those people.

Then, one day, in the streets of Manotick, Joseph Currier met Anne Crosby. He fell head over heels in love, and decided it was time to take himself a wife. Anne accepted his proposal and the date for the nuptials was set. Unfortunately, the wedding was to take place at the peak of the milling season and Joseph was not able to allow his workers to have the day off to attend the wedding. This was a big disappointment since Joseph was so well liked by his workers.

So, after the ceremony, Joseph took his bride, Anne, to see his mill, meet his workers, and accept their congratulations. Anne had never been in a mill before and was fascinated by it. She asked Joseph many questions and began to explore the mill as Joseph chatted with his staff.

Suddenly, there was a scream! Joseph turned to see that his bride’s dress had become entangled in the whirling machinery. She was suddenly flung with incredible force against a pillar and died on the spot.

Joseph Currier was heart-broken and when he left the mill that day he never returned. But when the light is just right, the face of Anne Crosby can be seen in a third story window of the mill. She is still waiting for Joseph Currier to return.
**Foresight...**

In the mid 1800’s, near the village of Kilmarnock, lived a man named Isiah Crouch. Isiah had a gift, but it was a gift he did not want and did not enjoy. It was the gift of foresight. The people around him did not understand him and thought that he could simply predict the future. They often tried to persuade him to use his gift for profit by predicting the results of a horse race or a game of chance. Isiah's gift only allowed him to predict who was going to die. Sometimes, he knew only a few minutes before the news would arrive and he would speak up. Other times, he knew many days in advance and would be in mental agony knowing that he could not say anything.

Isiah also had a brother, but he was the black sheep of the family and had much less integrity than Isiah. In fact, Isiah's brother was basically a liar and a cheat who was constantly encouraging Isiah to take advantage of his gift. He was constantly nagging Isiah to tell him if his girlfriend's father was about to die. His girlfriend's father was a widower and by far the richest man in the village, so naturally, his daughter stood to inherit a great deal if he should pass away. Now Isiah's brother would marry the girl if he knew her father was about to pass away, since he too would inherit the money. Her father had been ill for many years, but continued to cling greedily to life as well as his money.

One night when Isiah's brother was visiting, Isiah awoke from a very restless sleep and felt compelled to leave the house as he often did when he was soon going to know of another imminent death. Isiah's brother watched as he went down the stairs, out the door, walked down to the river, paddled across in a canoe, and stood in the field. In a trance, he paddled back and returned to bed.

In the morning, Isiah's brother questioned him optimistically about his vision. He wanted to know if Isiah had seen a vision of his girlfriend. For the first time, Isiah could not tell who would die, he could only see a funeral procession.

The next night, Isiah's brother again saw him rise from a restless sleep, go down the stairs and walk to the river. This time, when Isiah paddled across the river, his brother followed him in the rowboat. He watched Isiah stand in the field receiving his vision. Isiah's brother then followed him back across the river. The next morning, Isiah was again aggressively questioned about his vision. He would only say that he saw a funeral procession. Isiah's brother was persistent, though, and insisted that if it was his girlfriend's father, he would marry her that very day. Isiah told him once again that he did not know. His brother did not believe him.

Once again that night, Isiah's brother saw him rise from a restless sleep, go down the stairs and walk to the river. This time, however, he forced Isiah to paddle him across the river. He stood in the field with
Isiah and demanded to know what he was seeing. Isiah told him he was seeing a funeral procession with two coffins, but he didn't know whose they were. His brother was suddenly ecstatic, convinced that it was his girlfriend and her father and that he must marry her right away. Isiah was very upset and argued with his brother...

The next morning, Isiah Crouch’s house was empty. A while later two bodies were pulled from the river. They were the bodies of Isiah and his brother. They had argued in the canoe, fell overboard and drowned. Isiah had seen his own funeral.
Lady in Blue…

The red-haired lady in blue, Kathleen McBride, arrived sometime in the 1860’s on an early summer’s day, long after the Irish labourers and the British army had finished the Rideau Canal. Kathleen McBride took a room in the hotel beside the canal bridge, in Burritt’s Rapids. She rented one room and the maid reported that she had brought with her only one of everything— one blue dress, one pair of shoes, one brush, one suitcase. Throughout her stay, Kathleen spoke to no one.

All summer and into the fall, her flowing red tresses and long trailing blue gown travelled slowly on the path from tip to tip. Many a long hour she spent, standing on the upriver hill at the end of the island. She would look out over the Rideau River where the water divides, part into the canal and part downriver to the dam. Often, she stood at the dam watching the water roaring down the sluiceway as it released the surplus water.

Most of her time was spent walking the mile along the bank of the canal and the river, searching the water. What was she searching for, a son, a husband, a lover? Where could he have gone? Was he one of the many killed by accident during the canal construction? Did he die of the dreaded fever? Had he wandered off, work done, to seek a new life somewhere in America?

Kathleen went out for her last search on the moonlit night of October 31st, with frost crisp underfoot and the water bright and cold. She searched and searched, we know not where or why. Two days later a torn piece of blue satin dress was found on the bank, where the new bridge crosses the river in the middle of the village. In those days most of the countryside was forest, and wild animals abounded. Kathleen McBride might have drowned or been eaten by the bears.

As the years went by, whispers spread that on moonlit nights on the tip to tip trail near the dam, and near the little hill at the top end, Kathleen appears. The red-haired lady in blue still searches, walking or floating through the air, with her torn dress clutched to her breast.

Some have been close enough to feel the chill in the air as she passes by. Some have been close enough to hear a tiny keening cry as she searches on. As the decades pass, the sightings still continue. So, if by chance you venture out on a summer’s eve and she passes you by in the moonlight, please move to the side so you don’t hinder her everlasting search.
“Before any further electrification of the Rideau System is started, the whole electrification policy is undergoing the most critical examination and study”, John Matheson, member of parliament for Leeds and parliamentary assistant to the Prime Minister, announced in an address Saturday night at a special banquet of the Leeds Liberal Association in Brockville. “I have personally made strong representations against the policy of electrification of the Rideau”, Mr. Matheson added.

The Leeds M.P. was addressing the first meeting of the Leeds Liberal Association held following the coming into effect of the federal redistribution of electoral boundaries and many representatives were present from the areas added to Leeds, which include the town of Smiths Falls and the townships of North Elmsley, North Burgess and Montague.

A resolution was unanimously passed by the meeting to be forwarded to the Prime Minister and the Minister of Transport as follows: “Bearing in mind the immense importance of preserving the Rideau system in its original charm and loveliness, the Leeds Liberal Association urgently and respectfully requests the government of Canada to forego electrification and structural modification of the system”.

In his remarks Mr. Matheson said: “The Newboro conversion is still incomplete and still lacks the restoration work including substantial stonework and also a wood facing of the new steel gates which will leave the locks looking substantially unaltered”.

He continued: “Since conversion of the Newboro locks has not yet been completed the department has not started to assess the merits and demerits of electrification. During the study and assessment period the minister’s office will welcome any carefully thought out representations that may be made on the subject of electrification”.

The banquet meeting dealt with a number of business matters including federal redistribution. New members were added to the Leeds Liberal executive from the areas formerly in Lanark constituency that will now be in Leeds.

Tom Cossitt, president of the Leeds Liberal Association and meeting chairman, declared: “We are re-organized and ready to go whenever the next federal election arrives”.

Among those addressing the meeting was William Hunter of Smiths Falls, formerly Leeds Social Credit president and candidate for that party who joined the Liberal party several months ago. Other speakers included William Thompson, president of the Brockville Labour Council and prominent member of the New Democratic Party; Robert Dryburg, president of the Gananoque Liberal Association; E.I. Miller, Mallorytown; Elizabeth Sheldon, Brockville; G.T. Fulford, Brockville; Pieter Toxopeus, Frankville, and both Harvey Condie and Norbert O’Reilly of Smiths Falls who are vice-presidents of the Smiths Falls Liberal Association.
The concern of the residents and others interested in retaining the historical value of the Rideau Canal system can be easily appreciated.

The announced plan of the Department of Transport to update the handling of the traffic through the locks, which is being carried out at Newboro for a start, is disconcerting if one only considers the aesthetic side of the picture of the Rideau.

The statement by the Department of Transport published in this issue should allay some fears of the residents, cottagers, property owners as well as visitors. It would be nice, we agree, if the Rideau system could be continued in the image which most of us think of it—a quiet, placid waterway, with an occasional boat coming in sight to be locked through and then the lockmaster sits down again and enjoys another pipeful of tobacco while he enjoys a chat with a neighbor or perhaps tends the flowers or vegetable garden, or figures maybe it is time to cut the grass in the locks area.

We have to admit that there are thousands more boats crowding every waterway since the end of World War II. In order to service them there are many more marinas, more accommodation, more dining rooms, more stores. Whether we like to admit it or not the Rideau cannot be exempted from this change in our way of living.

Everyone can and does appreciate the position of the property owners who are not at all anxious to see the Rideau become busier each season. At the same time the system is public property, not private, and it follows that more and more people are enjoying more and more holidays and not all by any means go by car and trailer.

We have never made the Rideau trip from Kingston to Ottawa, but it is pleasant to contemplate. For those who are able to enjoy it, who has the right to deny them the experience?

It follows, as the Department statement intimates, that as the traffic increases it is not feasible to crank boats through the locks, however picturesque it may look. While the idea of a steady stream of traffic up and down the Rideau, like cars trying to get into Toronto on 401 on a Sunday night, is a picture that would make one shudder, especially a property owner on the waterway, changes, good or bad, cannot be stopped.

The Department of Transport indicates that as far as it is practical the electrification of the locks will be carried out in a manner which will preserve the original look of the lock system. No doubt there will be something sacrificed of the old and at this point we heartily agree with the petitioners that the modern changes need to be kept to a minimum.

The time may come before long, when the traffic will require some sort of permit system so that the Rideau will not become clogged with boats. The people signing the petitions now being circulated no doubt can conjure up a picture of holidayers overrunning private property and can see the result of litterers desecrating what has been a sylvan setting.

One thing is certain, the Rideau or anything else cannot miss the result of increasing population, increasing time to enjoy leisure and increasing influx from outside Canada. We cannot tell other taxpayers that they cannot use the public thoroughfares, whether they be a waterway or a highway, and that is what petitioners are in effect indicating—"We were here first, you stay away".
KINGSTON - Plans of the department of transport to install electric systems on locks of the Rideau Canal are being opposed by historical and civic groups and individuals in the Kingston area. One man termed the department's plans "a big joke".

A department spokesman said Wednesday the plans are about eight years old. It has been policy since 1958 to put electric or hydraulic systems into locks due for general maintenance.

About four of 48 locks have been changed so far, he said.

Lt.-Col. Louis Flynn, president of the Kingston Historical Society, said automated locks would destroy the historical aspect of the canal, built during the War of 1812 as a supply route from Ottawa.

"The canal lost its commercial aspect long ago and now is a historical waterway."

Mrs. Sam Fischman, of Elgin, executive member of the Leeds Liberal Association, complained that the canal system was being changed at a time when Canada is spending millions of dollars to restore historical sites.

Jack Monck, of Newboro, where one lock was turned over to electric power this spring, said the new system was not working.

"To me and a lot of others the whole thing has just been a big joke."

Representatives of tourist associations, townships and private businesses, in the Rideau Lakes area interviewed today, were unanimous in their dissatisfaction with the electrification of locks on the Rideau Canal.

They said the new system will not add significantly to the efficiency or speed of operation. It was learned Wednesday that the federal department of transport plans to go ahead with complete electrification on some 60 locks.

The Rideau was built as a supply route between Ottawa and Kingston in the War of 1812. Today the canal with its hand operated locks is used mostly by pleasure craft.

The first lock was automated this spring at Newboro, about 40 miles north of Kingston.

Several of those interviewed were in full agreement that the new plan would destroy much of the historical value of the Rideau.

They also said the idea of faster service was a weak argument because today the canal is strictly a holidayers route, and is not used by commercial traffic.
A “Help Save the Rideau” campaign has been launched in the form of a petition protesting the electrification of locks on the Rideau canal.

Alarmed by the news that all locks on the canal system are to be electrified and other changes planned over the next few years, residents and cottagers along the Rideau system are getting behind a campaign to stop the modernization trend.

The man behind the petition is D.H. Warren, a cottage resident and property owner at Chaffeys Lock.

Mr. Warren, son of a former lockmaster, is principal of Sydenham High School. He claims the petition is being well received, especially in the Chaffeys Lock area.

“I've never seen people in this area so disturbed over anything as they are over this problem,” he said.

He said the petitions will present an indication of the number of people extremely interested in the Rideau system.

“It gives the MPs something concrete to work on,” he said.

Mr. Warren noted that although the number of boats through the canal grows every year, the actual number of boats going all the way through the system is only about a third of the total.

“The rest are cottage owners and local residents who use the locks to go back and forth along the canal,” he said. “These are the people this area depends on during the summer.”

In a covering letter accompanying each petition form, he states:

“Information has leaked out that the lock at Chaffeys Lock is to undergo the same treatment that the lock at Newboro suffered last winter.

“The wooden gates are to be replaced with steel gates.

“The lock is to be turned from manual to electric operation and there appears to be a chance that the lockmaster’s house will be demolished and some fine old shade trees on the lock grounds taken down. Rumor indicates that the destruction is to begin this fall.

“We believe and we believe you do too, that the great attraction of the Rideau Waterway to tourists and to those of us who have made the Rideau area our summer home, is that so far it has successfully escaped the “rat race” of modern life and with its quiet sense of historic beauty added a great deal to the enjoyment of our holiday in the area.”

Mr. Warren states that the petition will be forwarded to John Matheson, M.P. for Leeds, so he can “intercede on our behalf with the prime minister if necessary.”

The Whig - Standard learned this week that the locks in the Rideau system will be electrified in a gradual program of modernization over the next few years.

The news brought on an immediate storm of protest from the Kingston Historical Society, cottagers, and residents along the Rideau system.
Many of the ancient hand-operated locks of the Rideau Canal will be twinned with modern models in a move to answer conflicting criticism from boaters and historians.

The twinning plan was outlined Wednesday, by G. W. Stead, assistant deputy minister of transport, in the face of Kingston-based criticism of the department’s program to modernize the old canal.

He flatly denied that the locks will all be electrified and said many are being restored to their original condition in an effort to show the canal as it was when Col. John By built it more than 100 years ago.

But the department is facing increasing criticism from boat owners and tourist organizations over the slow pace of traffic through sections of the canal.

“They tell us it takes too long to get through some of the locks,” said Harry Callan, general manager of the Eastern Ontario Development Association, and one of the waterway’s chief boosters.

BOTTLENECKS
And Ontario tourism minister James Auld, a boat owner whose Leeds riding includes a big piece of the Rideau system, identified the chief bottlenecks at Kingston Mills and Jones Falls. Both have long flights of locks and delays of up to two hours are not uncommon during the height of the summer boating season.

Mr. Stead said the department has already begun study of a plan to tuck a Seaway type lock out of sight at Jones Falls to supplement the existing ones and said a similar plan is being considered for Kingston Mills, although, he said, there are some costly complications there.

TOURISTS COMPLAIN
Mr. Auld said tourists have complained to his department of tourism being tied up - frequently overnight - at Kingston Mills after missing the last flight through in the evening.

He said the lack of docking and other facilities there frequently compounds the annoyance, and said twinning the old locks with modern models would give “the best of both worlds.”

Mr. Stead said the department has compiled a lengthy file of letters from historians and others interested in the old waterway who oppose any changes; but, he said, many of the objections are misguided.

Recent ones he said, resulted from the incomplete condition of the Newboro lock, which is the only one converted to an electric operation. But, he said, he hopes the objections will be removed when the reconstruction is finished this fall.

“REAL IMPROVEMENT”
Ted Clue, president of the Ottawa Power Boat Squadron, said the changes at Newboro are a real improvement which he does not think made any noticeable difference in the look of the lock. He said, however, that the locking time is reduced noticeably.

The job was part of modernization programs launched on both the Rideau and Trent Canal systems in an effort to meet the growing demand from boaters and to provide increased flood control.

But the Trent, which lacks the historic background of the Rideau, is being given an unmistakable modernization with seaway-type locks and other modern fittings.

“We are all much aware of the historic aspects of the Rideau system and the need to preserve as much of it as possible,” he said. Part of the program, he said, calls for restoration of many of the lockmasters’ houses to their original condition as blockhouses, by stripping away later additions and the familiar white siding.
In the flurry of petitions, statements charges, and counter-charges surrounding the proposed electrification of the Rideau canal system's locks, one group has been overlooked. What is the opinion of those who use the Rideau - the pleasure-boaters and yachtsmen?

In a poll conducted at Kingston Mills Wednesday and Thursday among boaters passing through the flight of locks, the answer was a resounding "no".

"We like the Rideau the way it is," they chorused with a few dissenting notes among the ten fresh-water sailors asked.

"Do you approve of government plans to electrify the Rideau locks? What is the reason for your answer?"

The reason only ten boaters could be interviewed was simply the low volume of traffic through the locks. Canal workers who man the locks, say this is usual for weekdays near the end of the summer vacation period.

Robert McKinnon of Elmira, N.Y., making his second trip up the Rideau, said "Leave the locks alone."

"Operating them manually is all part of the charm of the Rideau. I don't think the way they do it now is too slow. I'm on vacation and in no hurry to go anywhere."

"If the canal was used for commerce there might be a good argument for speeding it up, but this is not the case," he said.

Raymond Bernardin of Montreal, also making his second Rideau voyage said, "I'm not bothered about the time it takes to travel. I just went up to relax. I'd just as soon they left it the way it is. If they changed it, well, the Rideau would not be the Rideau, that's all."

Ted Lloyd of Toronto, "Electrification would speed things up but I don't think things should be speeded up. I think it has a bit of old world charm and it would lose some of its historical significance."

Seeing the Rideau for the first time, Philip Harris of West Pittston, Pa., said, "My wife and I were fascinated by how old it was. It was a pleasure to go through manually operated locks. Delightful. Why worry about speed when you're on vacation."

William R. Quinn of Kingston, Pa., who has been coming up the Rideau since 1951, was very definite.

"I don't like electric locks. It is much more picturesque the way it is."

A boater from Malone, N.Y., who preferred to remain anonymous said the only reason he was cruising up the Rideau was the roughness of Lake Ontario.

"We just want to go up a short piece and do some fishing so I wish we could get through these locks quicker," he said.

Looking somewhat like Field Marshall Montgomery surveying a battle from the turret of a tank, a Montreal man sporting a military black beret stood at the wheel of his boat and labelled electrification a waste of money.

"There is little or no commercial traffic, therefore no need for speed. It will take a large capital outlay to electrify the locks and it is not needed."

"It seems to me if you are going to go through the Rideau you take a week or so. What's the difference whether it takes five days or six days? It's just nonsense. We're here for pleasure," he said.

Another Montrealer, Robert Morse, said electrification would certainly make for better locks.

"There are 49 locks on the system and it is good if they could be operated more quickly. However, it would make it less picturesque as a tourist attraction," he said.

L. N. Knowlton of Pynton Place, Fla., hailed electrification as a "darn good thing."

"It would lessen labour and speed things up. It's an old fashioned way right now," he said.

A Rochester man, George Tunney, said electric locks would be great if he was in a hurry.

"I'm on vacation and an hour or so is nothing. After reading the history of the Rideau I'd like to see it stay the way it is. It's a beautiful waterway," said the American.
Rideau Efficiency

A recent story in this newspaper concerning the Rideau Canal referred to the great increase in traffic on the canal this season and mentioned the newly-electrified Newboro lock.

The Superintending Engineer of the system, Mr. L. W. Clark, is quoted as having said that the increase “since May 13th when the canal officially opened to traffic” is well over 1,000. The fact is, of course, that the whole Rideau system was thrown out of gear by the failure of those responsible in the Department of Transport to see that the work on Newboro and Beveridges locks was completed by the official opening date, May 13th.

What happened was that it was not until May 27th that the public was notified that these locks would not be opened. The possible date of opening was set at “about” the first of June. It was not until June 15th, that the Rideau Canal was actually “opened to traffic”. And the official notification from Mr. Clark was dated June 16th.

Mr. Clark and the Department are trying hard, obviously, to erase from the public mind the fact that the whole matter was badly bungled. In the first place there is no excuse for delaying the work, which started in October, to the point where a whole month of boating was eliminated. Secondly, the Department made no attempt to let the public know well ahead of time that there would be a delay. The original notification from Mr. Clark's office was dated 27th of May. The official opening date for the Rideau Canal is the 13th of May. This is hardly evidence of concern for the public who use the system, or for those who do business along its shores.

To top it all off, when the 15th of June came along (a date suggested to boaters by the Newboro lock people, incidently) an inquiry at the lockmaster's office at Kingston Mills drew a blank. They had heard nothing about whether the Newboro lock was actually open. A phone call to Newboro had to be made to get this piece of information. Even the other locks on the system had not been notified.

So much for efficiency along the Rideau. At that rate the public can do without the alleged great efficiency of electrified lock gates.
Criticism on operation of the Rideau Canal

Editor, Citizen: Instead of engineers in the department of transport making a full scale attack on the Rideau Canal under the guise of "modernization" and "progress" (by the introduction of power locks), there are a number of practical points that they might better consider. They might considerably increase the work force on the locks; since working the locks does not call for a high degree of expertise, this should be easy. The locks could then be served by shifts of men and thus kept open longer hours during the busiest season, and also during the entire day.

Another suggestion, not directly in line with the above, is that fees should be charged on the canal. I do not see why the Canadian taxpayer should maintain what is essentially a playground for the American tourist. I do not see why the taxpayer in, say, Newfoundland (or Prince Albert, Sask.) should maintain it for the benefit of the Ontario tourist. As an old hand myself in these waters, I certainly would have no objection to paying a reasonable fee for the use of the locks.

A third point is simply this: "modernized progress" apparently does not include the sanitary facilities along the canal. At most locks, they are non-existent, but at some, the engineers in their efforts to go modern have installed board privies with the conveniences of the late 18th century. As a historian, I do not worship the past, especially this aspect of the past. These filthy privies, some of them "new", will confirm American visitors in the impression some of them still have, that Canada is a peculiar backwoods country, tucked away in "the north woods"...

A.R.M. LOWER,
COLLINS BAY, ONT.
Save the Rideau

Sirs: - I am extremely distressed over the proposed changes in the Rideau Canal, whereby the locks, which are an important functioning historical attraction to the many tourists who are drawn to our province by them, will become another cold, impersonal, electrified, automated monster.

I feel the citizens of Ottawa should be alerted lest they too, lose their beautiful “giant’s staircase” without being aware that plans to electrify their locks may have already been insidiously begun. This has already happened at Newboro and Chaffeys Locks.

I cannot help but be confused that such an act should take place with Canada’s centennial year so rapidly approaching, a year in which all Canadians are to participate and be proud of their heritage!

The supposed benefits of this particular change - economy and speed - are unproven. The millions of dollars which will be spent could provide wages for larger staffs for many years to come. As for speed, this too is questionable, and I am sure that the greatest percentage of our tourists take this trip because it is leisurely and a relaxing change from their everyday way of life. They are on vacation, not competing in a race!

I wonder, sir, if any of your many readers would join me in my centennial project: “Save the Rideau!”

Lorraine A. Crane
Chaffeys Locks, Ont.
Editor Citizen: A local despatch of August 9, concerning the lockmaster’s house at Davis Locks, Rideau Canal, reports L. W. Clark, superintendent-engineer for the Rideau Systems as saying: “I wanted the house torn down when the lockmaster vacated it, but the historians wouldn't let us, so Mr. Baldwin applied...and leased it.”

Mr. Baldwin is a former historian and I am sure will take good care of the house. Mr. Clark, I am told, and I hope the report is incorrect, would like to treat the Rideau locks as he would have done the house-destroy them and start over again.

Mr. Clark, from his title, is an engineer, evidently the wrong kind of engineer, an engineer one would judge, devoid of understanding of any values except those of sheer engineering. That all engineers are not like him I can testify from my own friendships...

I put this lockhouse incident alongside what other civil servants have been doing here on the penitentiary property at Collins Bay. Of late years, four miserable little brick houses have been built right up to the permissible road line, while last spring a splendid old stone house on penitentiary property, one dating from 1867, was ruthlessly bulldozed. If you want to find where it stood, go and look for the pump--that’s all they left behind them!

When government through its employees sets bad examples, what can be expected of the average citizen? Government should set good examples: instead of that, shortsightedness, carelessness, undue expense, bad architecture, esthetic indifference, too often mark the projects branches of government undertakings.

In these departmental undertakings, we are up against our real government, not that of the gladiators in the Commons, but the real rulers, that is, civil servants...Ministers come and ministers go, the civil servant goes on forever, and rarely is he reluctant, in private, to make up a minister's mind for him. It is the civil servant who is the enemy of the public far more than the moon-baying politician, and he is an enemy hard to get at, for he is nocturnal and flees into the darkness of “ministerial responsibility” when sighted...

A.R.M. Lower
Collins Bay, Ont.
‘Reserved Several Thousand Acres for Public Use’
Rideau Must be Improved – Prof.

Co-operation among three levels of government, and private interest, is necessary to develop the full potential of the Rideau waterways system, a Carleton University professor has said.

Duncan M. Anderson, Carleton University geography professor who recently completed a 10-day boat trip on the system from Ottawa to Kingston and return, said, “the increase in popularity in recent years of camping and boating, makes it imperative that improvements be made.”

The professor used a grant from the National Council for Geographic Research to take the trip, which resulted from his interest in use of land resources. It also fitted into his department’s interest in the Rideau system.

The Federal transport department, Mr. Anderson said, has made many of the system’s locks attractive to tourists because of picnic and overnight camping areas available at them.

“But in terms of the system’s potential, several thousand additional acres of land (in addition to existing provincial parks in the area), should be preserved for future public recreational use,” he said.

USE LAKES AREA

Most of the additional acreage should be in the system’s headwaters in the Rideau Lakes area, he claimed. The Precambrian Shield, in which the lakes be, combines water, forests and rugged countryside into the most favored and beautiful area on the 125-mile system.

A survey shield area is needed to establish what riverside land is suitable for private cottages and what for provincial parks.

With more camping sites, more and better boat marinas are needed. This is where municipal government and private interests come in.

Prof. Anderson suggests this problem could be solved in the Ottawa area by excavating the land from which the soon-to-be-removed tracks just south of the old Union Station are residing.

This would lure those who prefer to remain below Rideau Ferry on their second and subsequent trips into the system from Kingston and because of the southern area’s natural beauty.

POLLUTION A WORRY

Water pollution and lowering water levels through the system are two major restraints on the professor’s suggestions.

Present plans of the conservation branch of the provincial energy and resources department call for an intensive 1967 study of all Rideau system problems. Mr. Anderson said the study should look at a way to reduce the production of algae caused by organic and inorganic wastes entering the water.

The algae which removes oxygen from the water may, in the professor’s view, grow so thick in the future that fish would die because of a lack of oxygen.

Mr. Anderson carried out generalized mapping of the shore line during his trip. This shows physical, vegetation, land level and land usage characteristics.
We Support The Rideau’s Modernization

Certainly it should be the desire and intention of everyone concerned to preserve wherever possible the important historical aspects of the Rideau waterway system, running between Kingston and Ottawa. The Rideau Canal is an integral part of the history of eastern Ontario. At the same time consideration must be given also to the need for modernizing the mechanical aspects of the system itself—the locks and the bridges. Here, as in most things in this world, a sense of compromise would seem to provide the answer.

The Rideau Canal is becoming increasingly popular with not only local boaters but also with boaters who come from other parts of the country and from the United States. Even a few years ago most of the boats taking a through trip on the Rideau were craft sufficiently large to provide sleeping accommodation or at least large enough to carry camping equipment for use at night. This is by no means the case any longer. Now large numbers of small outboard and inboard craft are making the through trip of the system; travelling in these small craft by day and stopping for the night and for meals at the increasing number of places which provide this sort of accommodation for boating enthusiasts. The Rideau Canal throughout its whole length is providing more and more business for local people.

All of which is fine, but, antiquated facilities can only stand just so much traffic pressure and no more. The same can be said for the personnel who are charged with keeping the system in motion. That limit is rapidly being reached—the mechanical system must be modernized. And we see no reason why this is not possible without spoiling the important historical features of the Rideau. Having just completed a tour of this waterway this summer, we took particular note of one lock which has been rebuilt and converted to a push button operation—the lock at Newboro. In no way could we see that the lock or scenery had been damaged by this work.

This lock can now be operated more rapidly, more efficiently and with much less human effort than before. We can see nothing wrong with this at all. And it would certainly be the answer for other spots on the Rideau, where there are high lifts or drops, involving a number of locks and bridges. Notably Jones Falls which in peak traffic becomes a real bottleneck because of the delay unavoidable in manual operation.

We were very impressed with the Rideau Canal personnel throughout the whole length of the system. Invariably we found them cheerful and prepared to make every effort to accommodate the passage of boating traffic, but there is a point beyond which human capabilities, unaided, cannot go. The Rideau Canal system is very near that point. Push-button locks and bridges need not mar the scenery or spoil sections of historical significance. We support the modernization of the system, because this way more and more people will be able to enjoy it.
Modernizing the Rideau Canal

The newly outlined plans for rehabilitation of the Rideau Canal system should remove opposition to the scheme from those who feared the canal would lose its historic character. To begin with, nothing will be done until after department of transport officials have consulted with municipal authorities along the canal this fall. As well; a number of the old stone structures will be retained, in addition to some of the old locks, even after new facilities have been built.

There can be no doubt that the canal system must be improved and modernized. Many of the staff members work long hours to operate the locks by hand; the use of electric power would reduce the work load considerably. Moreover, living quarters are often inadequate, however much they might appeal to the historians. New accommodation is needed.

The concern of those interested in the history of the canal is, of course, entirely understandable. Though built originally for strategic reasons to provide an alternate route from Kingston to Montreal, the canal is an integral part of the Eastern Ontario story. Many of the masons who helped Colonel By and his engineers build the waterway later settled in this area. Ottawa itself—or Bytown, as it was then known—owes much of its early growth to the development of the canal.

The problem has been to find a way to reconcile the interests of the historians with those of the department of transport, which must operate the canal to the best advantage of the public and the canal staff. The department appears to have found the answer. It may not satisfy everyone concerned with the maintenance of the canal’s history. But some degree of compromise will be necessary on all sides.
Ottawa face-lift
Modernizing canal could spoil tourist attraction

In the past few months word has leaked out that the Rideau Canal - one of Ottawa’s major tourist attractions - is in for some major changes.

The word has angered hundreds of persons along the whole length of the canal.

The changes, it seems, are modernizations aimed at speeding up the operations of the locks.

But in the process, the changes could completely destroy the whole canal system as a tourist attraction.

Some of the changes contemplated by the department of transport include the replacement of wooden lock gates, hewn out of huge pine timbers by British Sappers and Irish laborers 130 years ago. In their place will go steel gates, completely electrified so all the lock master has to do is press a button.

Unfortunately, this dooms the complicated but beautiful system of locking now in use that helped make the Rideau Canal one of the engineering marvels of the world when it was built, and still attracts thousands of spectators during the summer.

If the canal were a commercial transportation system, as it once was, then the modernization contemplated would be necessary.

But the canal is now a tourist attraction.

It has become extremely popular in the last decade because it has escaped the “rat race” of modern life. Tourists and summer home owners flock to the area to rest and relax.

The quiet beauty, and the historic background make the area one of the best for vacationers in Canada.

And the majority of vacationers want to keep it this way.

This fact, unfortunately, seems to have been overlooked by planners.

A poll conducted recently at Kingston Mills, near the south end of the canal, shows that boaters passing through the locks there are against modernization.

Of the ten persons interviewed, Raymond Bernardin of Montreal was typical.

“T’m not bothered about the time it takes,” he said.

“If they changed it, well the Rideau would not be the Rideau, that’s all.”

Robert McKinnon of Elmira, N.Y., making his second trip up the Rideau felt the same way.

“Operating the locks manually is all part of the charm of the Rideau. I don’t think the way they do it now is too slow. I’m on vacation and I’m in no hurry to go anywhere.”

Another man who has a cottage on the Rideau, added that if he is in a hurry to go somewhere, such as to Kingston to shop, he goes by car. “The canal is for relaxation,” he said.

Only one of the ten was in favor of the system of electrification. L.N. Knowlton of Paynton Place, Fla. explained: “It would lessen labor and speed things up. It’s an old-fashioned way right now.”

Mr. Knowlton and his supporters, it appears, are in a minority. But they have on their side the engineers of the department of transport, who were able to get their modernization project underway before the public realized what was happening.

Last winter the locks at Newboro, about two-thirds of the way down the canal from Ottawa, were “electrified” and steel lock gates were installed.

To offset the advantage and to save the tourist industry the canal creates, a group headed by the son of a former lockmaster has started circulating a petition along the southern end of the canal.

The man, D.H. Warren, principal of Sydenham High School, said that between 600 and 900 persons have signed the petition in the small area between Westport and Jones Falls.

And the petition is just nicely underway.

Those signing it are saying they are definitely against the department of transport’s plans to
Though the canal does not bring as many boats to Ottawa as to some spots further south, it should have a special spot in the hearts of the people here.

The city was once called “Bytown” - after Colonel By, the builder of the canal.

It helps attract thousands of tourists who travel by car, because they know they can take a leisurely boat cruise and see the beauty of the city.

The canal also has resulted in miles of parkland on either side extending right into the heart of the city - something too few cities can boast about.

The construction of the canal and the commerce that developed from it helped transform this city from a lumbering outpost in the wilds of Upper Canada, into a place Queen Victoria could consider as a capital for the newly-formed country of Canada.

electrify all the Rideau locks and in particular one at Chaffeys Lock, which has been slated for modernization this winter.

The petition may also be extremely important in the Government’s final decision.

As a result of pressure already exerted on the government by cottagers and residents, the government has issued a statement saying it would consult the municipalities along the Rideau this fall to find out their views on modernization. If there is determined opposition, the government has said it will consider abandoning its project.

Thus there may still be time to stop the project.

But pressure will have to be exerted along the full length of the canal.

If people in Ottawa want to be able to take their children out to the Hartwell locks at Carleton University or the Chateau Laurier locks, and show them a bit of beauty - and Canadian history - they had better act quickly.
The following are short information sheets on selected subjects concerning the Rideau Canal. These can be used in the classroom by the students for supplementary background information or can be used as further support for the activities.

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**From Defense to Detente**

Four blockhouses stand on the banks of the Rideau Canal as silent reminders that the canal was built for the British military. Although Canada and the United States have been allies for many years, the Rideau was part of a scheme to keep Americans out of Canada.

As a result of the War of 1812, the British and Americans realized the weakness of the British army’s St. Lawrence River supply route. With another war expected, the Americans began to prepare defenses for the south shore of the St. Lawrence and the British began searching for an alternate route into the Great Lakes.

Although more than 10 years passed before construction began, the Rideau Canal was built to fulfill this role by connecting the Ottawa River with Lake Ontario at Kingston. The Rideau would be part of the Duke of Wellington’s grand plan for the defense of the Canadas.

Lockmasters’ journals occasionally have entries mentioning the movement of troops along the canal and many of the lockstations and blockhouses were fortified by militia after the Rebellions of 1837. Peace, however, prevailed.

During the early years, the Rideau served as an immigration route rather than a military supply route. However, with the opening of new, large locks on the St. Lawrence, immigrant traffic was reduced to a trickle.

Although few of the immigrants who traversed the Rideau settled in the area, a number of towns were established on the banks of the canal. Commercial use of the canal flourished as forwarding companies transported needed supplies by steamer to the area, raw materials to factories and manufactured goods to market. In 1834, there were only five steamers in use on the canal. By 1841, this had increased to 22.

The number of steamers actively plying the canal had increased to 39 by 1890, but the character of the vessels was altering due to a change in the use of the canal. Shipping of goods and raw materials was now faster and cheaper by rail. As well, the public was more actively seeking ways to spend their leisure hours in rest and relaxation. As a result, vessels were providing more room and comfort for passengers and less space for cargo.

In 1885, the Rideau Belle was launched in Kingston as the first luxury steamer on the Rideau. She was soon to be followed by others such as the John Haggart, Ella Ross, Rideau King and Rideau Queen. Resorts sprang up to cater to the whims of the more sedentary. The waters of the Rideau became well known for their abundance and variety of fish and several fishing lodges were established. Recreation had become the major role for the Rideau and its traffic.

With the 20th-century came modern technology and the acceptance of the automobile. Roads were improved and transportation became much faster and easier. Individuals were buying their own private boats and cottages rather than relying on the palatial steamers. Although the steamboats disappeared the Rideau’s role as a vehicle for recreation remained unchanged.

In 1972, the Rideau Canal was handed over to Parks Canada in recognition of its historical significance and today is one of nine Heritage Canals operated and maintained by Heritage Canada, Parks.

The Rideau has changed little in over 160 years because it has adapted itself to a variety of roles. From a military resource to immigration, commerce and recreation, the Rideau Canal’s role in history has gone from defense to detente.

*by Brian Tychie
Of Steam and Stone Vol.12  No.3  May 1986*
**1783: A Fortnight on the Rideau**

On September 29, 1783, Lieutenant Gershom French, a veteran of the American Revolution, set off to “(explore) the Lands on the Ottawa River from Carillon to the Rideau and from the mouth of the River to its source, from thence to Ganononcoué and the same to its Fall into the St. Lawrence”. Upon the completion of his trip on October 13, 1783, Lt. French submitted the first written account of the region that today is drained by the Rideau Canal.

Gershom French was born in the province of New York to a distinguished New England farming family. In 1776, just prior to the beginning of hostilities in the 13 colonies, French commenced business as a merchant. However, he soon exchanged these duties to take up the commission of lieutenant in the British Army where he served under John Peters, captain of the Queen's Loyal Rangers.

Described as a “brave, good subject”, French fought at the Second Battle of Saratoga in 1777 where the British were soundly defeated. During the retreat north, French was captured by the rebels but managed to escape both hanging and his captors to report for continued duty at Sorel, near Montreal, a base for provincial troops.

In 1781, a new corps, the Loyal Rangers, was created out of the amalgamation of the King's Loyal Americans and the Queen's Loyal Rangers. French was transferred to this new corps where he continued to serve as lieutenant under Major Commandant Edward Jessup. This corps was mainly comprised of frontiersmen and did considerable work for the Royal engineers.

Following the American Revolution, one of the major problems for Sir Frederick Haldimand, Governor of Quebec, was settling the thousands of Loyalist immigrants who were fleeing north from religious and political persecution in the newly created United States. To assuage the debt of honour that he felt the British government owed these loyal subjects, Haldimand sent out several survey parties to examine various locations in the present-day Ontario to see if they were suitable for agricultural settlements.

Due to his wartime experience in gaining enemy information in the Vermont and New Hampshire woods, Lt. French was one of the party leaders chosen. He was to explore and survey the lands flanking the ancient Indian canoe route that joined the already charted Lake Ontario and Ottawa River. With the aid of seven soldiers, two Canadians and one Indian guide, French set off from Carillon in two canoes.

French's journals describe the Rideau corridor to the summit as being very fertile with only a few swamps and feeder streams. There was plenty of "very Tall and Straight (timber) without any underbrush, and...a Man will be able to clear, in the American Method an Acre fit for seeding in eight days".

Due to French's favourable report of the area, settlement was planned for the spring of 1784. However, no official action was taken and it was several years before the first Loyalists settled on the Rideau.

While Lt. French was not assigned to ascertain the navigability of the Rideau lakes and rivers, his journal is important as it provides the first written confirmation of a feasible water route through the area. Today, Lt. Gershom French's descriptions of the terrain provide valuable information as to the nature of the region before the advent of the Rideau Canal.

*by Susan Code*

*Of Steam and Stone  Vol.9  No.7  August 1983*
**Colonel By Commemorated**

Canada has a multitude of heroes; many of whom died unnoticed among us. Lieutenant Colonel John By of the Royal Engineers is one of these. In his short time here he founded Ottawa, helped secure the country from attack, and built one of the finest pieces of early 19th century technology now remaining on the North American Continent.

His compassion for the men working under him and his courage and natural ability earned him the respect of all who knew him. On May 11, 1979 a commemorative stamp was issued in honour of this great man. Below, Edward Bush has prepared a brief outline of his life.

John By was born on 10 August 1779 in London, the second son of George By, customs official, and Mary Brian. He was baptised in the church of St. Mary Lambeth.

He graduated from the Royal Military Academy, Woolwich, and was commissioned a second lieutenant of artillery on 1 August 1799. He transferred, however, to the Corps of Royal Engineers in December of the same year, and served in that regiment for the rest of his career.

By's first wife was Elizabeth Johnson Baines, who died in 1814. They had no children. He then married Esther March, who bore him two daughters, Esther March and Harriet Martha. By was a devoted father and husband.

From 1802 to 1811 By served in Canada, stationed at the Citadel, Quebec, where he obtained his captaincy in March 1805. He worked on the fortifications of Quebec, which were being strengthened at the time, and gained valuable experience for the future in the construction of the Cedars Canal.

In 1811 By found himself on the unemployed list of officers because of the reduction of the military establishment after the Napoleonic Wars. In 1826, however, perhaps on the recommendation of the Duke of Wellington, By was chosen by General Gothar Mann, Inspector General of Fortifications, to take command on the Rideau as superintending engineer. He arrived at Quebec on 30 May 1826.

With his initial arrangements completed at Montreal and Bytown in the summer and autumn of 1826, By got the work under way at three locations along the projected canal in the spring of 1827; travelling the whole line by canoe a number of times.

The main burden of his great endeavour was finished by late 1831, but the project was not completed until the spring of 1832. The delay was caused in part by widespread sickness, which brought the work to a virtual standstill during three successive summers, and finally by the untimely action of a mill owner flooding a section of the waterway in order to make repairs to his mill.

By was recalled to England in August 1832 to account for his expenditure before a parliamentary committee. Actually Colonel By was never called before the committee, perhaps because of his rapidly declining health. In the end, the committee exonerated By of all charges of peculation, but expressed regret that he had not managed to keep his expenditure under closer control.

By brooded over his treatment, retiring to his recently purchased estate, Shernfold Park, in Frant, Sussex. His health deteriorated rapidly. He suffered a series of strokes, beginning in the summer of 1834. He died at Shernfold Park on 1 February 1836; he was survived by his wife Esther, who died two years later. Both his daughters died without issue, so that with their passing, the By family line by 1848 was extinct.

Of Steam and Stone Vol.5 No.1 May 18, 1979
**Christmas 1826 at Dow’s Great Swamp**

Surveying parties often had to wait until the ground was frozen to travel the marshes and swampy areas of the Rideau. For one such party it had taken almost five days of groping through thick snow-covered woods and swamp thickets to reach Dow’s Lake.

The following is an account of how these Rideau Canal surveyors spent Christmas in 1826 by the side of a swamp, which today is known as Dow’s Lake:

“When night drew on, two of the axe-men were sent off to rig the wigwam shanty by the side of a swamp. This was done for two reasons, or say three: first because water could be had in the swamps to drink and cook with, if the ice were broken to get at it; secondly, the boughs of the hemlock grow more bushy in such places, and are so far more easily obtained to cover the shanty; and thirdly, there are generally dry cedar-trees found there, which make excellent firewood, and the bark of dry cedar is the best thing in the world for lighting a fire with.

When the party got to the place, there was a very comfortable house set out, a blazing fire with a maple back log, ranging along for a length of twenty or thirty feet. There, on the bushy hemlock would we lie down; roast pork before the fire on wooden prongs, each man roasting for himself; while plenty of tea was thrown into a large kettle of boiling water, the tin mug was turned out, the only teacup, which being filled, went round until all had drunk; then it was filled again, and so on; while each with his bush-knife cut toasted pork on a shive of bread, ever using the thumb-piece to protect the thumb from being burned; a tot or two round of weak grog finished the feast, when some would fall asleep, - others to sleep and snore; and after having lain an hour or so on one side some would cry Spoon! - the order to turn to the other - which was often an agreeable order, if a spike of a tree-root or such substance stuck up between the ribs.

Reclining thus, like a parcel of spoons, our feet to the fire, we have found the hair of our heads often frozen to the place where we lay. For many days together did we lie in these wild places, before we could satisfy ourselves with a solution of the problem already posed represented. In Dow’s great swamp, one of the most dismal places in the wilderness, did five Irishmen, two Englishmen, two Americans, one French Canadian and one Scotchman, hold their merry Christmas of 1826 — or rather forgot to hold it at all.”

*From John MacTaggart’s Three Years in Canada. 1829, London.*

*Of Steam and Stone Vol.8 No.3 January 15, 1982*
Hardy Souls
Across inhospitable seas they came to a land of tumultuous rivers and uncharted forests. Many came to escape the harsh life in the Scottish Highlands, the potato famine in Ireland, and the newly formed Republic of the United States of America. Others were soldiers disbanded in Canada.

A few hardy pioneers found their way, by water or land, to the Rideau and Cataraqui Rivers. Burritts Rapids, Merrickville, Old Slys, Chaffeys Lock, Kingston Mills and other communities predate the Rideau Canal. But settling in this remote area of Upper Canada was a major undertaking in those days. Although a military project, the Rideau Canal was also a stimulus to settlement. The building of the canal attracted many workers who later settled along the canalized river system. For others, the waterway made the journey to new lands much easier.

The first necessity in pioneer country was shelter. The settlers soon learned to use the axe because the log shanty had to be built quickly before the winter. In the first year the immigrants lived mostly on “government stores” awaiting their first crop to grow among the stumps. Land clearing came soon after, the men dragging the stumps out by oxen and later with a simple machine known as a “stump-puller”.

Potatoes and grain, the main staples, were cultivated with the hoe. Much of the land was fertile. But in many areas the soil was either too shallow or too poor in nutrients to be suitable to agriculture, much to the disenchantment of many settlers.

by Gilles Séguin

Of Steam and Stone  Vol.1  No.5  July 16, 1977
The Spirit of the Voyagers
C'est l'aviron qui nous mène, mène mène. C'est aviron qui nous mène en haut.

For French Canadians, these words from the chorus of one of their traditional folk songs evokes images of the oars that their courageous ancestors used to defy the whims of rivers and the unpredictable mood of lakes as they crisscrossed this continent in all directions. Proud songs such as this stirred the spirit of the voyageurs in their bark canoes.

The experience, the strength and the daring of these men proved indispensable to Colonel By when he first set out to inspect the site for the construction of the Rideau Canal. Seeking the aid of the Hudson's Bay Company, he obtained two canoes and five experienced men from the fur-trading group. French Canadians have always been known for their entertaining folk songs, which raised spirits during perilous voyages.

One story, told by an employee and friend of Colonel By named MacTaggart, recalls a celebration when the Rideau Canal was being surveyed, at which he encouraged the French Canadians to continue singing their spirited anthems around the campfire long into the night. MacTaggart urged them on, calling: “Sing! Sing!” He pointed out that no one is more cheerful or sociable than a French Canadian.

At the time of its construction, the Rideau Canal was one of the largest projects in North America. Before work began, about 2000 French Canadians were working at lumbering operations and on log drives in the Ottawa River Valley. The demand for manpower drew the French Canadians to the Rideau Canal project. Many came to escape agrarian problems and the threat of overpopulation in the communities of Lower Canada. These workers distinguished themselves by their experience in clearing land and by their stamina during days of exhausting labour.

Many years have passed and the joyful echo of folk songs has faded and died along the shores of rivers and lakes and the axe no longer rings in forests which are long since gone, but the presence today of 300 000 French Canadians in the capital attests to the courage of this race which participated with other canal workers in the construction of this historic waterway over 160 years ago.

by Marie LaFlamme

Of Steam and Stone Vol.8 No.10 August 27, 1982
The Royal Sappers and Miners

The successful completion of the Rideau Canal in 1832 owed much credit to the efforts of the “Corps of the Royal Sappers and Miners”. They were a specialized military group whose ranks were filled with soldiers skilled in trades such as masonry, carpentry and smithing. The corps had been created in 1772 to maintain and repair the defences at Gibraltar.

In 1827, two companies of these men were sent to Canada to aid the construction of the Rideau Canal. Lt. Col. John By had requested these companies of soldier artificers to perform a variety of duties from the construction of buildings to guard and picket duty.

It is at Bytown, now Ottawa, that one can see many of the results of their labours. The Bytown Museum, originally constructed as the commissariat office, is an excellent example of the masonry work of the corps. The Sappers and Miners had also constructed three stone barracks upon “Barracks Hill”, now the site of Canada’s parliament buildings. In addition to these masonry buildings, the companies constructed the huge lock gates and the iron crabs and gate fittings for the canal.

It was during emergencies that the Royal Sappers and Miners proved their worth. The corps were called in to complete the Hog's Back dam in 1829, one of the more difficult engineering feats along the canal. In 1828, the 7th company was sent to Newboro to relieve the contractor who was plagued with malaria among his men.

Lt. Col. By was very pleased with the performance of this group of soldiers. Upon completion of the canal, the companies were disbanded and free land was granted to those who wished to remain in Canada. Some of the men were also given positions as lockmasters along the canal.

Not only did the Royal Sappers and Miners play an important role in the building of the canal, but those who remained pioneered the communities of the Rideau today.

by Susan Ashley

Of Steam and Stone Vol.3 No.11 August 25, 1978
Social Upheaval on the Rideau Canal (1826-1832)

In a frontier society, scenes of violence were widespread. The work sites of the Rideau Canal were no exception to this rule and were subject to their own periods of unrest. Conditions combined to create an explosive atmosphere: the work was arduous and dangerous, and living conditions were difficult. Because manpower was abundant, day labourers were maltreated, underpaid and often in debt; delays in the payment of wages were not infrequent. Furthermore, the group of workers was not homogenous - a fact that led to ethnic and religious conflicts. French Canadians worked side by side with Scottish and Irish immigrants; these last had a very poor reputation as hard-drinking, hot-tempered rowdies who were quick to demonstrate their discontent through violence and ready to seize upon an opportunity to assert themselves as a community.

The scenes of violence between workers during construction of the Rideau Canal were a clear sign of dissatisfaction, but were generally of short duration and were not politically motivated. In only one case was there rebellion against authorities; this occurred for economic reasons. In fact, there were three strikes in Bytown in the spring of 1827 - day labourers supported by Ottawa Valley lumberjacks, sought to protest against low wages and poor working conditions. Religious clashes were much more numerous and violent. In 1829, 400 people, Orangemen and Catholics, came to blows at the Isthmus.

Acts of vandalism and brawls were, more often than not, a reaction to poverty and the tension accumulated during the day. Arising from personality conflicts, they were planned in taverns and fuelled with a heavy supply of alcohol. In 1829, a fair degenerated into a riot when Irish workers provoked Bytown area farmers. Hogs Back was the scene of a reprisal in 1830. After stealing a powder keg, the Irish blew up a private house, causing damage to three neighbouring buildings. As fate would have it, the only person killed was the Irishman who lit the fuse.

To maintain law and order, Colonel John By called in the military for there were as yet no organized civil forces. After the arrival of two regiments of the Sappers and Miners in 1827, all attempts to systematically oppose authority disappeared. Their presence helped to reduce the extent but not the number of skirmishes. Not until 1835-1840 did violence cease to be part of daily life on the canal.

by Edwidge Munn

Of Steam and Stone Vol.9 No.2 February 5, 1983
The Bytown Shiners

The construction of the Rideau Canal required hundreds of labourers to clear the forests, dig trenches and build masonry. The majority of the men hired for the work were Irish and French Canadians. During canal construction and for a decade afterward there was a clash between the Irish and French later called the “Shiners Wars”.

While working on the canal, the Irish labourers were housed in rough log shanties at each lockstation, and each settlement possessed several “shebeens” or log taverns. The flow of whiskey was a major problem in those days. Celebrations like St. Patrick’s Day became violent riots with brawling in the streets of Bytown and other canal towns like Newboro. The first recorded St. Patrick’s Day disturbance was in 1828 when an Englishman clashed with a group of Irishmen and was slain for his bravado. At the Hog’s Back settlement in 1830, 200 Irishmen paraded with flags in hand. Abe Dow, a local settler for whom Dow’s Lake was named, reported: “They carried green flags to illuminate St. Patrick and they amused themselves by fighting.”

When the canal was completed in 1832 many of these men poured into Bytown and lumber camps looking for work. At this time the French were the prime lumbermen, but the Irish were determined to find work in the business.

By 1845 the Irish had replaced the French in the lumber trade in the Ottawa Valley, but not before there was a series of conflicts between the two groups. After 8 months of lonely, spartan life in the bush, the men converged at Bytown with their pay, and let loose. Fights between the French and Irish would break out, then the men returned to the bush, their money spent, their tension relieved.

These “Shiners Wars” were a part of frontier society on the Rideau. They gave Bytown such a reputation that the whole country was surprised when the town was renamed Ottawa and made the capital of Canada.

by Susan Ashley

Of Steam and Stone Vol.4 No.2 January 11, 1979
The Forgotten Craftsman

“Under the spreading Chestnut Tree,
The Village Smithy stands;
The Smith, a mighty man is he,
With large and sinewy hands;
And the muscles on his brawny arms,
Are strong as iron bands.”
Henry Longfellow, 1841

When Longfellow first penned this tribute to the Village Blacksmith in 1841, it was in honour of a man who Longfellow seemed to hold in awe. It was a description of a man of iron who was perhaps the single most important craftsman of his time. A craftsman, who today, is mostly forgotten simply because we have outgrown the smith's ability and necessity to make technological advances.

Blacksmithing is generally considered to have begun around the year 2000 B.C. with the first discovery of iron. At this time bronze was being used as a material for weapons of war. With the introduction of iron for the manufacture of crude swords, axes and spears, all of which could pierce a bronze shield, the blacksmith moved to the forefront as a craftsman of importance.

As time went by, blacksmithing spread to other parts of the world. Its use changed from simply producing weapons of war to other more peaceful means. Consider the early pioneers of North America. These people needed tools and trade goods to plow the land and trade for needed supplies. Every new community had at least one blacksmith and sometimes more. These early pioneer smiths made and repaired plow blades, kitchen utensils, tools, weapons and manufactured thousands of nails for house building. As the frontier grew, so grew the need for new methods of tool manufacture and new advances in smithing.

The growing expertise and technological ability of the smith led to an even greater realm of importance for the smith. A prime example of the importance of the blacksmith is the building of Jones Falls lockstation on the Rideau Canal, considered then and now as one of the engineering marvels of the canal.

The blacksmith would build and maintain the metal sections of carts used to haul the large stone from the quarry in Elgin to the site, keep oxen shod, make and keep sharp and hard the stone masons' tools. The tools of the mason included plug and feather sets, chisels, bush hammers and stone hooks. The smith would make gate pieces and endless miles of chain necessary for the opening and closing of the massive gates. Before the mason and the canalmen could begin their work, the blacksmith must have commenced his.

It is amazing that a craftsman of the obvious necessity and ability of the smith should disappear so quickly. In fact, it was the blacksmith's ability that contributed to his disappearance. The smith eventually developed the technology to make machines capable of producing more quickly and in greater quantities the needs of a growing technological society.

By the 1930's many of the techniques of a craft over 3000 years in the making had been lost and with these techniques had gone the tribute to the single most important craftsman of his time.

by Kevin Fox
Of Steam and Stone Vol.7 No. 16 August 21, 1981
Making a Nail

In the past, say 200 years ago, if you needed nails, you either made them yourself or went to the local Smithy. Outlined below are the steps required to make a nail.

First, the size of nail you desire determines the diameter of the metal required by the Smith. The end of the chosen metal is heated in the forge. The Smith removes the metal to the anvil and hammers on one side. The Smith then turns the already hammered side at right angles to the anvil and hammers again. Continuing the process of hitting, turning, hitting, the hot metal eventually draws the metal to a point.

This completed, the Smith partially cuts the nail, while hot, a quarter inch above the desired nail length. The Smith then places the hot nail quickly in a nail header or vice and hammers the head.

If you would like to see a nail being made, you are invited to come to the Blacksmith Shop at Jones Falls Lockstation.

by Kevin Fox

Of Steam and Stone Vol.7 No.8 June 26, 1981
Was it Worthwhile to Work on the Rideau Canal?

During the construction of the Rideau Canal, a forty-shilling note ($10) represented 14 to 16 hours of work per day for a period of about two weeks. An ordinary labourer would earn about two shillings and sixpence (63 cents) per day. More specialized tradesmen received better wages. A blacksmith, for example, earned five shillings per day, and a carpenter six shillings. A skilled mason could earn up to seven shillings per day.

Labourers had to pay six to eight shillings per week for lodging in uncomfortable camps. Families could not live on the work sites, and their needs had to be met from labourers’ wages.

The cost of living was high not only because of the distance between the work sites and supply points (Montreal and Kingston), but also because contractors took some advantage of this fact to make extra profits on various goods; whisky, for instance was bought for two shillings per gallon and resold to labourers at nine shillings per gallon. On a few occasions supplies were distributed free of charge to encourage the men to stay on the work sites during the winter or during periods of illness.

The desire to build a canal rapidly and at a low cost resulted in several problems with labour. Low wages and deplorable living conditions provoked three demonstrations at Bytown in the spring of 1827. After the Royal Engineers arrived, continuous military surveillance of work sites was instituted to avoid repetition of such incidents.

It is now interesting to calculate the quantity of goods that could be bought by the family of a labourer or a mason, taking into account their daily wages and consulting the following conversion table as well as the list of prices of the products prevailing at that time.

12 pence (d) .................1 shilling
1 shilling ..................25 cents
1 pound sterling ...........$5.00

Beef (lb) .....................9d
Pork (lb) .....................5d
Coffee (lb) ..................8d
Corn (60 lb) .................6s 3d
Butter (lb) ...................8s
Eggs (dz) ...................9d
Potatoes (bu) ...............3s
Peas (bu) ...................2s
Oats (34 lb) ................2s 6d

Considering the fact that a horse was worth 15 pounds sterling, how many days of work would a labourer have had to put in before his family could purchase one? What of a mason, a blacksmith or a carpenter?

Of Steam and Stone Vol.8 No.9 August 13, 1982
Malaria on the Rideau

One of the world's deadliest diseases threatened the lives of Colonel By and his men during the construction of the Rideau Canal. The disease was known in England and in the colonies as "ague" until the 18th century when an Italian name was introduced - malaria. Meaning "bad air", the name implies a connection between "swamp fever" and the unsavory mists given off by marshes. Despite better understanding of the facts today, this name still persists.

Malaria, a tropical disease, is not indigenous to Canada, but was probably introduced during canal construction by British soldiers who had contracted the disease while serving in the tropics.

Human malaria is transmitted by female mosquitoes of the genus Anopheles. Mosquitoes act as a carrier of the parasite - they bite the infected person then transfer the parasite by biting other people. Eventually, the parasite invades and feeds upon the red blood cells of the victim.

Attacks or fevers reoccur until treated with quinine, until they subside or until the disease proves fatal. It is still unclear whether quinine was used on the canal, as the first medicinal use of quinine was in 1820. The quinine contained in tonic water must have provided many a colonial with a convenient excuse for indulging in a "Gin & Tonic"!

The Rideau Canal area is the northern world limit for malaria. "Ague" is brought to an end by cold weather. Consequently, the disease is seasonal in annual epidemics which often have two peaks, one in spring and one in the autumn. The first of these is due to latency of infections contracted late in the previous autumn, of which the incubation period is prolonged until the next season, a natural means of ensuring the survival of the parasite over the cold season.

If infected, a person builds tolerance to re-infection by that strain. Thus in northern areas, such as the canal, where infection was rare, tolerance to the parasite was low and their reaction to initial infection was generally severe. At the Isthmus (Newboro) in 1830, 234 out of 332 men constructing the canal were immobilized with the fever - 14 died. Colonel By himself contracted the disease and recurring bouts are said to have hastened his death. Malaria... the canal builder's worst enemy.

by Brian Crook

Of Steam and Stone Vol.3 No. 10 August 18,1978
Have You Been Bitten Today?

Perhaps you are reading this article while sitting on the open after-deck of a cruiser or houseboat. Tied to the dock below Kingston Mills or in the cut at Newboro, you find the quiet of the evening relaxing. Suddenly, you become aware of an intruder! Angered, you take a swipe at him with your “Of Steam and Stone” and put a bloody smear on the back page. “#%4&@/ mosquito!” you mutter.

As much as the mosquito is hated today, the effect it has on most of us (itching, red bumps) simply does not compare with the hardships it inflicted over 160 years ago.

When construction of the Rideau Canal began, large sections of the navigation route were vast swamps and marshes; breeding grounds for mosquitoes. The mosquito is the agent that transfers the disease from one individual to another. Malaria is caused by a minute germ that lives and multiplies in the bloodstream. When a mosquito bites an infected person, it carries the germs and releases them into the blood of its next victim where the germs multiply.

John MacTaggart, Col. By’s civilian clerk of works, described the disease (which is also called swamp fever and ague): “The fever and Ague of Canada are different, I am told, from those of other countries: they generally come on with an attack of bilious fever, dreadful vomiting, pains in the back and loins, general debility, loss of appetite, so that one cannot even take tea, a thing that can be endured by the stomach in England when nothing else can be suffered. After being in this state for eight or ten days, the yellow jaundice is likely to ensue, and then fits of trembling - these come on some time in the afternoon, mostly, with all. For two or three hours before they arrive, we feel so cold that nothing will warm us; the greatest heat that can be applied is perfectly unfelt; the skin gets dry, and then the shaking begins. Our very bones ache, teeth chatter, and the ribs are sore, continuing thus in great agony for about an hour and a half; we then commonly have a vomit, the trembling ends, and a profuse sweat ensues, which lasts for two hours longer. This over, we find the malady has run one of its rounds, and start out of bed in a feeble state, sometimes unable to stand, and entirely dependent on our friends (if we have any) to lift us on to some seat or other.”

Quinine or “Peruvian Bark” was the only known cure for the disease, but it was scarce and very expensive. It is surprising, perhaps, that a cure was discovered at this time, for the medical practitioners of the day did not understand the disease at all. As the names swamp fever and malaria (“bad air”) imply, it was thought to be caused by breathing the putrid air of the swamp. An 1827 medical treatise described it this way: “Ague or intermittent fever, is a fever consisting of paroxysms, or periods of fever, between each of which there is a distinct and perfect intermission from febrile symptoms... The chief predisposing cause is debility, however induced: but the grand exciting cause is marsh miasma, or efluvia arising from stagnant water, or marshy ground, impregnated with vegetable matter in a stable of putrific active decomposition. Dampness, and the night air, are particularly favourable to the full operation of marsh miasma.”

If malaria did not kill you (hundreds died during the construction of the canal), it could haunt you for life, for it was a recurring disease. Peter Sweeney, first lockmaster at Jones Falls, frequently mentions his recurring fever in his personal journal. Further reading in this journal may indicate, however, that this was as likely to have been caused by the effects of overindulgence in alcoholic beverages. Perhaps in Peter’s case, it was a combination of both.

Malaria is an unheard-of illness in this part of the world today due to elimination of many breeding grounds, introduction of spraying programs, better nutrition and the high technology of today’s medical care.

Have you been bitten by a mosquito today? by Brian Tchie

Of Steam and Stone Vol.8 No.10 August 27, 1982
Do You Meet the Qualifications?

One hundred and sixty years ago, upon the completion of the Rideau Canal, the British Ordnance sought to employ 23 capable individuals to serve as lockmasters at each of the new lockstations between Kingston and Ottawa. Imagine for a moment if you had been here 160 years ago to apply for the lockmaster position on the Rideau Canal. Would you have met the qualifications? Provided below are the terms of employment for the position of lockmaster prior to 1856, while the British Ordnance was still in command of the Rideau Canal.

Job Description
Responsible for operation of the locks at their station, for minor repairs, and maintenance, collection of any rents for Ordnance land in the area of the station, and keeping of the daily journals. Under the new system tolls, in 1842, the collection of some duties and function as sub-accountant to the Ordnance storekeeper in Bytown.

Statement of Qualifications
Possible candidates should be able to read, write legibly, understand simple arithmetic and possess sufficient knowledge on accounting methods to keep books.

The potential lockmaster should be under 50 years of age and in good health with no infirmity which might affect his physical or mental powers.

The potential candidate should have a steady and sober moral character.

Married men with families will be given preference as the most suitable candidates since they would become valuable settlers along the canal.

The potential candidate should have been with the 7th or 15th Company of Royal Sapper and Miners during the construction of the Rideau Canal. Faithful service to the British military and firsthand knowledge of the canal are crucial to the Board of Ordnance’s consideration of your petition.

Salary
Salary will range according to the class of your station.
First-class station - Kingston Mills: four shillings, six pence per day.
Second-class station - Bytown, Long Island, Merrickville, Smiths Falls, Jones Falls and Brewers Upper Mills: four shillings per day.
Third-class station - all others: three shillings, six pence per day.

Uniform
Issued in 1847, these uniforms are compulsory and will serve to emphasize the lockmaster’s position and authority over boatmen using the Rideau.

It includes a blue greatcoat with scarlet collar and Ordnance buttons as well as a blue cloth shell jacket decorated with scarlet collar and cuffs and an embroidered crown on the right arm. As well, grey cloth trousers and a blue forage cap with a scarlett band. Cap, trousers and jacket will be supplied annually, the greatcoat biannually.
Benefits
The majority of the lockmasters will be provided with defensible houses for accommodation at lockstations.

The lockmasters will be permitted to cultivate a small kitchen garden provided it does not interfere with public duties.

The successful candidates may retain any pension they have held as further insurance of their loyalty.

If you feel you meet all the above required qualifications and fully understand the duties of the position as outlined, please notify us at the Rideau Canal Office. As a Heritage Canal, we would be very interested in meeting anyone who would have even qualified as a Rideau Canal lockmaster 160 years ago.

by Christine Bauer

Of Steam and Stone Vol.7 No.8 June 19, 1981
The Lockhouses

On May 31, 1838, Thomas Jenkins, the lockmaster at Nicholson’s, wrote in his work journal “masons finished their work at the new lockhouse this day” and then a few entries later, he recorded he “inspected the work there and found it all going good”.

In September of 1841, Peter Sweeney, the lockmaster at Jones Falls, scribbled a fast entry in his personal diary - “removed into the new house at the locks today”. Sweeney had little time to appreciate his new home. The navigational season was at its height and besides this he was suffering from a painful attack of malaria all through that month. To escape the dreaded lake fever Mrs. Sweeney was away visiting friends in Bytown.

The houses which both Sweeney and Jenkins described were the defensible lockmaster’s houses. In the decade following the rebellion of Upper Canada in 1837, 16 of these unusual dwellings were erected along the canal at undefended lockstations. The British military authorities who then operated the waterway feared sabotage of the canal. As well, the houses fulfilled the important need for staff housing. In the early days, the lockmaster was required to be at the station all year round for maintenance and security reasons.

Originally, the houses were all one story stone dwellings with tinned roofs and double porches. Many were equipped with gunsits. As well, the structures were erected on high points of land as an extra defensive measure. At first glance, these houses would have looked like small forts although they were primarily family homes.

Over the years, the lockhouse changed in appearance as the military function of the canal disappeared. Gunsits were filled in with wood or stone masonry. Wooden additions or frame upper stories were added to make the original four room houses more spacious. At least four of the buildings fell into disrepair and were torn down.

However, the majority of these structures were lived in by lockmasters and their families as late as the 1960’s. Today, the remaining 12 lockmaster’s houses are used for different purposes; staff housing, Parks Canada offices and museums. At Jones Falls, one can visit Mr. Sweeney’s house and see how this lockmaster lived in the 1840’s.

by Susan Warren

Of Steam and Stone Vol.8 No.9 August 13, 1982
A Sense of Community
The country roads connecting rural lockstations with the rest of civilization were fairly poor up until fifty years ago. The people who lived around the lockstation had to make do mostly with each other’s company. This was especially true during the winter months when there was no boat traffic. Many warm tales of neighbours and comradeship have come out of those lonely nights.

Croquignole, euchre, Christmas and Easter parties would be hosted in turn by the neighbours of the small community. Often the lockmaster’s house was the largest house around. The people could dance in the parlour.

One of the high spots in a lockstation winter would be when the carpentry crew came. The crew, of about twelve members, would “camp” at the lock station, sleeping on bunks in the storehouse. This workforce was provided with their own cook, for a crew would live at the lock site for sometimes two months, building a new set of gates or a new dock. Because of their long stay they would become temporary members of the small communities. They provided a friendly diversion from long winter boredom. At night, when the day’s work was done, the crew, lockmen and families would sit around the wood stove, stories and homemade bread in abundance. When the families retired for the evening, more stories and other refreshments would be in greater abundance.

It was a special time for the lockstation when this crew came. The empty space which the crew left in the community when they moved on would soon be filled by hard work to prepare for the new navigation season, and later new faces to relate the past winter’s stories to.

by Melinda Warren

Of Steam and Stone  Vol.1  No.5  July 16, 1977
The First Tay Canal

It is a well known fact that the Rideau Canal was constructed by Lieutenant Colonel John By of the British Engineers for the military defense of Upper Canada. However, the small Tay Canal Branch, located midway between the communities of Bytown and Kingston, was built independently and for different reasons than the Rideau Canal. The military settlement of Perth (est. 1816) is located on the Tay River six miles upstream from the Lower Rideau Lake. Perth was not part of Colonel By's original plan and no amount of lobbying by the citizens of Perth was able to convince the British Army to have the proposed Rideau Canal pass through Perth, capital of the District of Bathurst.

The defensive strategy of the Rideau Canal depended on the fostering of economic development and settlement within the Rideau Corridor. The canal was expected to provide means to export local resource and generate power for mills located at the lockstations. During the construction of the canal, Perth prospered as a supply depot. The Tay River was first used by Perth merchants Ferguson and Wylie in 1828 to supply the contractors at First Rapids (Poonamalie). Although this was the first time any extensive trade was conducted on the Tay, the river was only safely navigable during the spring months. The village merchants wanted unbroken water communication to Lower Canada to reduce the transport costs involved in the treacherous overland route to Brockville.

In 1831, the Tay Navigation Company was incorporated with the right to form a joint stock company to raise 3000 pounds to render the Tay River navigable from Perth to the Lower Rideau Lake. The Board of Directors appointed William Morris (father of Alexander, the first Lieutenant-Governor of Manitoba) to be president and principal shareholder. Stocks were offered in both Perth and Montreal and in the spring of 1831 construction began on four locks with adjoining flat dams that would provide a draught of three and a half feet up to Perth. The same principles involved in building the Rideau Canal were used.

Like its counterpart, the Rideau, the Tay Canal encountered difficulties through lack of funds, sickness, heavy rains and miscalculations. However, in 1834 the Tay Canal opened for business with five locks, six dams, two bridges, a turning basin in Perth and several long embankments. The businessmen of Perth, led by the Tay Navigation Company, were now prepared to welcome the burgeoning canal trade as part of the hinterland of Montreal markets. Barges traversed the Tay with potash, wheat, beer, leather and distilled spirits to be transshipped at the Perth Landing at the mouth of the Tay for interior ports. The Tay Navigation Company had its own steamboat, the Enterprise, but due to weeds and the shallowness of the Tay, it made only two trips.

Despite the promise of prosperity through canals, economic success lasted only a decade for the Tay. The decline in popularity of canals through the rise of railroads saw the Tay fall into virtual disuse.

The first Tay Canal is the only successful example of private enterprise in the form of canal construction that was a result of the Rideau Canal. Although these early locks are now in ruins and are bypassed by the second Tay Canal (1883-1891), they stand as reminders of the dreams of an earlier generation.

by Susan Code

Of Steam and Stone  Vol.9  No.1  January 7, 1983
People on the Rideau
From the diary of Martha Phillips, daughter of Thomas and Martha Phillips, July 1839.

“20th Saturday. Started this morning at half past five and went 2 miles up the River Tay for lading then returned and shortly after got on Rideau Lake. This lake is very large and the scenery around is grand. The day was so pleasant that we remained on deck most of the time. Having crossed this we proceeded through the narrows a most sickly place. The Isthmus which has been excavated and connects Rideau Lake with Mud Lake has water which smells disagreeable. At 10 we got to Kingston Mills and remained there that night. We would have gone to Kingston had we not run aground at Brewer’s Mills which detained us half an hour or more.

21st Sunday. A delightful morning started at 6 and arrived at Kingston at half past seven. We were very alarmed on approaching the bridge at Kingston, owing to the man’s neglect who kept the bridge in not drawing it back. When no person was there to open the bridge the captain called to the Engineer to backwater, and he came against the bridge with a tremendous crash. The ladies immediately ran down stairs and remained on the Lower Deck. The captain desired all that could, to jump on the bridge feeling she would sink. The boat was defended in one way the bridge being drawn back we passed through and arrived safely. The only injury done was that part of the railing of the deck was broken away.”

Of Steam and Stone Vol.8 No.7 July 16, 1982
The Steamship Age
Walls of limestone and granite echo back the steam whistles of approaching boats. The steamships of the 1800’s ply their trade on the Rideau - carriers of freight, men and produce.

In the early days of the canal steamers travelled laden with immigrants for settlement here and farther west; squared timber was carried to Montreal - pine, oak, and elm for the ships of the British Navy; cargoes of cheese from local factories; wheat, flour, pork and butter from valley farms.

The towns and villages of the Rideau prospered. Towns such as Merrickville increased their populations four times over in the first thirty years of the canal’s operation.

The flourishing settlements along the canal produced more for the steamers and barges to haul - sawn timber for American markets; iron, mica, lead and phosphates from mines at Chaffey’s, Newboro, and other lakes of the Rideau system; and transporting furniture, farm implements, beer, cider and whiskey to and from these communities.

The early steamers were powered by the forests of the Rideau, using the dry, quality hardwoods of maple, elm, ash and birch. But the depletion of local forests for fuel and timber necessitated a change. The smell of wood fires succumbed to economics, economics in both space and finance. Coal was now a more efficient fuel.

The turn of the century saw the practical steamers such as the Antelope and Shanly give way to the frivolous ladies, luxury passenger steamers with dining saloons and staterooms instead of storage decks; the Rideau Queen, Ella Ross, Rideau Belle, James Swift and Rideau King.

But after nearly a century the steamship era died. Freight barges and luxury launches lost to the competition of rail and road. In 1935, the last steamship sailed the Rideau leaving behind memories of slower moving, more romantic times.

Of Steam and Stone Vol.6 No.6 May 16, 1980
Tourism on the Rideau Lakes

Today tourism conjures up different images to each of us. Some see the man in Bermuda shorts and a Hawaiian shirt with camera in hand. Others see the tourist as a source of income. Tourists are both of these and at the same time neither. No stereotype really describes the modern tourist. They do bring money to the area and take away with them pictures and hopefully a renewed spirit. They come for many reasons; fishing, boating, to see part of Canada's heritage or just simply to relax along the quiet green shores of the canal.

The first tourists in the Rideau area did not wear Bermuda shorts but rather military uniforms. The gentlemen officers of the Kingston garrison came to the heart of the Rideau Lakes and the area around Smiths Falls to hunt. A group of them established a camp near Rideau Ferry. These early hunters were joined by the occasional pleasure party or a traveller on a longer trip and were the only people that used the canal for pleasure.

Following the Civil War in the United States all this changed. People throughout north eastern United States and southern Ontario had more money and work days were shorter than they had been. There was, at least for the new middle class, time for recreation away from the industrial cities. They invaded the Thousand Islands and the Rideau Lakes, camping in their tents or staying at local inns and taverns. By 1877 the number of visitors had become great enough to prompt Thomas Bartlett Kenney to open the first true resort at Jones Falls Lock. It still survives today in the hands of a third generation of Kenneys. Kenney was followed in 1886 by Simmon's and in 1899 by the largest of the Rideau resorts, the Opinicon, both at Chaffey's Lock.

Other famous resorts on the Rideau Lakes included the Rideau Hotel in Newboro and the Tweedsmuir in Westport. These resorts catered in their early days to fishermen and their ladies. The men came to fish pike and more importantly the black and small mouth bass. A man could land 50 bass a day, none of them under three and a half pounds. The ladies did their share of fishing as well. However, the women preferred the more gentile pastimes of rowing, playing shuffleboard and picnicking.

Sunday afternoon picnics were a place where young men and women could meet and become acquainted under the watchful eye of a chaperon. The lunch included smoked ham, turkey, tomatoes, hardboiled eggs, potato salad, homemade bread, fresh churned butter, wine, apple pie and other things both sweet and good.

If you were out fishing at lunch a shore dinner would be prepared by the guides including fresh fried fish, Canadian back bacon, home fries, corn on the cob or other vegetables in season with the same variety of sweets for dessert.

The attractiveness of the Rideau Lakes with their high rocky, forest covered banks, the fishing, the blue waters and access via the canal brought people to the area. Many wanted to stay longer. The canvas wall of the temporary camps gradually turned to the permanent walls of the modern cottages. By 1890 cottages were being built on many of the islands and parts of the shoreline from Upper Brewers Lock to Smiths Falls. Today, this trend continues.

Whether the hunting, fishing, boating or just the relaxation brings visitors to the area, the Rideau Lakes have provided a place to renew their spirit and calm the nerves of the work-a-day world.

by Keith Dewar

Of Steam and Stone  Vol.8  No.9  August 13, 1982
The Floating Resorts

Possibly the first true resorts on the Rideau Canal were literally on the water. The early Rideau passenger boats provided both berths and cabin accommodation as well as meals.

One of the first “luxury” steamers on the system was the Prince Albert. The term “luxury” may, however, have been somewhat overstated. An English passenger aboard the Prince Albert in 1856 throws some doubt on the comfort of the vessel: “She had an upper open deck. Under it was the ladies cabin, very narrow, with narrow berths and a passage outside around it, and a small gallery at the other end. Beneath it was the gentlemen’s cabin, with a row of sleeping places at the sides and a narrow dining table down the centre. The accommodation was thus very confined and rather less airy than we could have wished.”

If there was some doubt about the Prince Albert’s comfort there was none about the 69 foot Rideau Belle’s. She was built by Robert Davis in 1885 and licensed to carry 40 passengers. Her decor featured cherry wood paneling in the dining and staterooms, curtains were of green velvet and satin cushions adorned the settees and sofas.

As time progressed more luxury was added to the palace steamers of the Rideau. The Ella Ross had a dining saloon that could seat 50 and a lounge 75 feet long. More exciting than this was the new patent spring mattresses that were found on every bed.

The larger James Swift (later renamed the Rideau King) went one step further with the addition in 1897 of electric lights. The grand lady of the palace fleet was the Rideau Queen, the last true luxury boat on the Rideau route. It had willow deck chairs, electric lights, velvet curtains and full length mirrors in every cabin. In the dining room you could feast on roast beef and yorkshire pudding, fresh oysters, a wide selection of fresh vegetables and for desert strawberries in cream. Both the strawberries and cream were bought from a local farmer who rowed out from “Strawberry” Point on Cranberry Lake to sell directly to the purser.

By the First World War the palace steamers were living on borrowed time. The coming of the railways, road improvements and the introduction of small easily affordable inboard motor boats all helped seal the fate of these grand floating palaces.

by Keith Dewar

Of Steam and Stone Vol.8 No.6 June 25, 1982
A Free Ride on the Rideau King

While visiting his grandparents' cottage on Lower Rideau Lake, in Beveridge Bay during the summer of 1904, sixteen-year-old, Frederick Roy Dickinson wrote about several interesting incidences on the canal in his diary.

“Mon. Aug 15, 1904. As to-day was a civic holiday in Perth the Masons there ran an excursion on the Rideau King away up the lake about 25 miles from the locks to Newboro. The Rideau King locked through going to Perth this morning before we were up. The boat left Perth at 8 a.m. with about 300 merry excursionists and at 10 a.m. we heard it blow for the locks. Harold, Ernie, Tom and Fred hurried to the Upper Locks to meet Auntie Till and see some of the people on it. When were near the locks we met about 50 men and boys who had got off the steamer at the Upper Locks and were walking down to the Second Locks among whom was Mr. Jack Griffith. He knows us all as he sometimes comes down to the Cottage in the yacht with Uncle Will. He called us to one side and told us a good plan how to have a free trip to Newboro.

We had no intention of going and were soon in high spirits. He said that before the excursionists got on the boat in Perth they gave their tickets to the man at the door as they always do at a show or circus and they were not given any return tickets. At Newboro any person could get on and go to Perth free whether they belonged to the crowd or not and the boat-men would not know but what they came from Perth in the first place. He said that Harold, Ernie and Fred could get on the boat when it came to the Second Locks with all the men and boys who had walked down. So the three of us hustled to the Cottage and got permission to go. In about two minutes we had our Sunday clothes on. We grabbed our purses for fear of having to pay and made a bee line for the locks just as the boat got in. We mingled in with the men and boys who had walked down and when they got on we got on too. Everything went all right and no person knew but what we got on at Perth, and we saved our fare and were each 60¢ ahead.

The three decks were crowded and alot of people had not seats. After we started from the locks we soon reached Rideau Ferry. A lot of people had tickets bought here and were all ready to get on. The boat was so crowded that only one-half were allowed on. While we were here Fred caught sight of Mrs. Pratt and Mrs. Johnston on the wharf with Mrs. Frank Pratt. They saw Ernie and I also and came over to the boat to see us and we had a good chat with them...

We soon left the Ferry and when Fred was walking on Second Deck some girl asked him if Fred Dickinson was his name. He told her it was but that he did not know her. She said she was Tina Furny the servant girl we had for a couple of years in Perth. She asked how we all were and where we were living.

As I said before Newboro is 25 miles up the lake and as we had never been up more than 10 or 12 miles we enjoyed the trip fine as the scenery on Upper Rideau Lake is magnificent. On the top deck the Perth Citizens Band enlivened the crowd with music and on the second deck the piano and violin chimed together. Now and then we would meet a yacht and would salute it. Again we would catch sight of a family of loons swimming about near the boat and when we reached Rocky Narrows the fishermen could be seen hauling in the big salmon. The three of us climbed on the top deck where the band was and enjoyed the sun and wind...

After locking through the Narrow Locks we soon reached Newboro at 1:15. On the boat we bought a lot of peanuts and had a time eating them. At Newboro wharf the Brass Band of that place escorted the people up town. After going up town we walked around viewing the principal streets and soon began to feel hungry. As we had no time to get lunch before starting from the locks we went and had ice cream and chocolates. Although this kind of a lunch was not very strengthening it suited us perfectly.
Just a few minutes after having the cream the Rideau Queen blew for the Newboro Locks. We ran to the locks and got on it and sailed to Newboro wharf. It is a larger boat than the King and very pretty. We went all through it. Harold knew the “Purser” on it and he asked if we would like to go home on it but we did not go for fear something might happen if we did. The Rideau King would be back first as the Queen had to go to Westport and Portland and the Cottage folks would wonder where we were.

While we were in Newboro the Perth Baseball Team played the Elgin team on the Newboro Agricultural grounds. Perth was victorious and defeated Elgin by 13 runs to one. We did not go to see the match. At a quarter after three the King blew and at 3:30 we were on our way home. We got sandwiches on the boat and were not very hungry till we reached the locks. We arrived at the Cottage at 6 o’clock.”

*The original diary of Fred Dickinson is owned by the Dickinson and Turner families.*

*Of Steam and Stone Vol. 7 No. 11 and 12 July 10 and 17, 1981*
Brass Point Bridge

When one wants to cross a body of water he has several choices; swim, take a boat or cross a bridge. In the case of the Rideau Canal you have your choice of 59 bridges of one style or another. The Brass Point Bridge carries the Burnt Hills road across the canal approximately half-way between Jones Falls and Upper Brewers Lockstations. It is the only bridge system of its type in Ontario.

The 467 foot bridge consists of four fixed steel spans (Warren truss design for the engineers) and a king post truss timber swing span. There are five of these king post bridges remaining on the canal; Nicholsons, Kilmarnock, Jones Falls, Lower Brewers and Brass Point. The design of these bridges on the canal dates to the opening of the waterway in 1832. These early bridge did not swing, however, but rolled back on to the road in a manner similar to extending and retracting a gangplank. By 1843, the forerunner to the present swing type was in use. Changes in the pivot system were made and the present design came into being in 1864. The superstructure is essentially unchanged.

What exactly is a king post truss timber swing span? The bridge consists of a heavy timber frame and a pair of central vertical posts (king posts). Running from the posts are iron suspension rods which attach to the timber frame. The effect is not unlike a miniature suspension bridge. The bridge swings on iron rollers along circular iron track; all are hand-operated. These king post truss bridges are rebuilt by canal staff every twelve years. The king post at Brass Point is combined with low level steel spans which makes it unique. The other king posts are independent.

Of Steam and Stone Vol.3 No.1 May 17, 1978
**With the Turn of a Crank**

It would be wonderful if all bodies of water were at the same height, with neither rapids, nor waterfalls. Unfortunately, this seldom happens. To overcome the problems in travelling between adjoining bodies of water, locks are often used. The function of a lock is straightforward but some special terms are needed.

“WEIR-ed WORDS” (forgive the pun!)

WEIR - An obstruction used to control the flow of water.

LOCKGATE - A sturdy wooden gate at each end of a lock used to hold back water, creating an enclosed unit when needed.

SLUICE - A metal flap which can be raised to allow water to enter from one body of water. GATE SLUICES allow water to flow directly through the gate into the water below; WALL SLUICES open to allow water to flow through underground tunnels to the lower level.

CRAB - Not a big-clawed crustacean, but a winch with a crank on it, used to open and close lockgates and sluices.

UPBOUND LOCKAGE involves moving from a lower body of water to a higher body of water. Boats enter the lock from the lower level, and are held in place during lockage by the use of mooring cables. After the lower gates are closed, the canalmen move to the upper gates. Here they slowly open the sluices to allow water from the upper level to flow into the lock. The water level in the lock slowly rises to meet the upper level, at which time the upper gates can be opened for the boats to exit.

A DOWNBOUND LOCKAGE occurs more quickly, and does not require the same amount of attention to turbulence and currents. After closing the upper gates, and insuring the boats are ready, the canalmen open the sluices on the lower gates producing a rush of white water into the water below. The water may be let out at maximum speed as there are no boats below to worry about. When the levels are again equal, the gates on the lower level are opened and the boats exit.

THE SKILL required to control the turbulence in the lock and supply a smooth ride up, is not always obvious. Careful control of the amount of water allowed in by each sluice, and the speed with which it enters, helps boaters to keep their craft under control. For example: By opening the sluice on the same side as the boats wider than the other sluice, a strong current is set up to take turbulence down the other side. Not only does this reduce the effect on the boats, it also causes a secondary current which helps to hold the boats in place during lockage.

*Of Steam and Stone Vol.6 No.15 August 8, 1980*
Reading the Landscape

The tendency of modern and not-so-modern man to leave his mark on the land and to bend it to his needs has resulted in major facelifts across our countryside. Yet, no matter how many dents are made in an area, the basic landscape is never tamed.

Imagine a wrecking crew in the act of demolishing the Rocky Mountains or a team of bulldozer operators trying to create vast mountain ranges in the prairie provinces. These thoughts are ridiculous because major landforms maintain their character due to sheer size if nothing else.

If we look at the Rideau Canal system we can see the same thing is true on a much smaller scale. In 1826, when Lieutenant Colonel By brought in oxen and wagons and hand-forged shovels, he and his crews did make quite a change in the way the land looked. Mighty oak and white pine came crashing down and limestone and sandstone blocks were quarried and hauled in. The river’s path was sometimes rerouted and in some places the waters dammed up, flooding large spaces of low land, creating marshes.

It was a grand battle: the water fighting to stay wild and the men fighting to subdue it. Also, it was a harsh battle. The rivers and lakes lost their freedom, but many men paid for that loss with their lives.

In the end there were 47 locks constructed. Of the 198 kilometres of waterway, 180 kilometres remained natural. Only 23 kilometres were artificial channel created by pushing dirt, rock and swamp and fighting against the bugs, heat, cold and sickness to finally connect the different lakes and rivers into the navigable waterway we know as the Rideau Canal.

Over a six year period Colonel By and his men were responsible for a number of significant changes in the land. However, compared to the effect thousands of years of glacial ice and waters had had upon the land, the construction of the Rideau Canal was pretty small potatoes.

What we see today is a combination of glacial and man-made effects which resulted in some interesting things. How many people know that the Rideau Canal flows in two different directions? Just above the Narrows Locks at Newboro there is a point in Upper Rideau Lake which has a higher elevation than any other point on the canal. Since water flows from high points to low points as gravity dictates, from this high point in the Upper Rideau the water flows both toward Kingston and toward Ottawa. The basic landscape still remains as it was pre-1826, but at that time the water flowed only to the east. When the canal was constructed an artificial cut was made, joining the Upper Rideau Lake (Rideau River system) to Newboro Lake (Cataraqui River system), which allowed this unnatural two-directional water flow.

Whenever we try to appreciate what Colonel By achieved, we should try to imagine the land he had to work with. Fortunately, as we look around the canal, we can come up with a pretty good idea of what By was up against.

The southern Rideau Canal is characterized by rough granite rock which was formed over 400 million years ago. A quick glance at this land will show bare rock poking out of the ground. This was caused by the scraping action of glacial ice. While glaciers with their tons of weight managed to scratch the top of this hard rock, they could not mold the rocks into different shapes. It is no wonder that By took a long, hard look at possible routes and chose to skip from lake to lake, rather than attempt to dig a canal through the rock. Even so, the small cuts joining the different lakes were no easy task. In this section of the canal we can see that the locks are placed in the cuts between lakes allowing boats to pass to a different elevation.
The flat land of the northern area is a sharp contrast to the southern Rideau. This northern section was formed under the ancient glacial seas which followed glaciers. To a geographer the sand and clay laid down in flat beds in this area are a telltale sign of marine origin, but fossilized whalebones, small clams and barnacles unearthed at Ottawa add clues that everyone can use.

A look at a map shows that a river, not lakes, form this section of the canal. Here locks were constructed to overcome actual rapids and falls which occurred on the route. Most of this section of the canal is meandering river framed by flat or slightly rolling fields. However, in Ottawa, granite outcrops provided one of the most challenging difficulties on the canal. Today it is exciting to see the water rushing over the gigantic rocks at Hogs Back. In 1826 these same features were the source of much frustration resulting from several failed attempts to control the water’s energy.

To successfully create the Rideau Canal, Colonel By and his surveyors had to read the landscape and decide upon the best approach to this mammoth task. Because the landscape remains basically unchanged with time, we can stretch our imaginations and pretend to see the land as it was originally. We can picture rapids running where dams and locks are now in place, or a series of separate lakes that are now joined together by artificial channels. We can imagine low unproductive lands which today are vitally alive as marshes. By doing this we can better realize the framework Colonel By worked within and better appreciate the remarkable accomplishment the completed Rideau represents as a heritage canal.

by Leslie Joynt

Of Steam and Stone Vol.10 No.7 September 1984
**Behind the Scenes on the Rideau Canal**

Since 1972, the Rideau Canal has been operated by Parks Canada as a heritage canal. Over a century and a half ago, under the supervision of Lieutenant Colonel John By of the Royal Engineers, the Rideau and Cataraqui Rivers, with their associated lakes and rivers, were transformed into a navigable waterway by the building of dams, locks and waste weirs. This construction allowed water levels to be raised, eliminating rapids, providing a direct route for navigation from Ottawa, our nation's capital, to Kingston on Lake Ontario.

The Rideau River Watershed draining north to Ottawa, is identified by a flat limestone, sandstone and clay terrain known as the Smiths Falls Limestone Plain. Four reservoir lakes, located upstream from Poonamalie Lockstation, are essential to canal operations.

The Cataraqui River Watershed drains south to the St. Lawrence River through an area dominated by the Precambrian rocks of the Frontenac Axis. This watershed contains 10 reservoir lakes. Prior to the construction of the canal part of the Cataraqui Watershed flowed via Morton Creek into the Gananoque River. With the building of the Morton dam, water flow was diverted to assist in the operation of the canal.

Originally, the canal was built to serve as a military supply route between the strategic ports of Kingston and Montreal. Operation was directed solely to provide adequate water for navigation. Over the last century, the waters of the Rideau have supplied mills, factories and settlements. Today the waters of the Rideau are used for navigation, flood control, recreation, hydro-electric power, sustaining fish and wildlife resources, maintaining water quality and urban and rural water supply. Water management provides the means by which the needs of the different water uses can be satisfied.

**Reducing fall water levels**

With the end of the navigation season, canal staff begin talking about "the draw down". At this time, water levels are lowered in the reservoir lakes and canal reaches to winter holding levels. This must be done in order to protect the canal structures over the winter months and to accommodate the anticipated spring run-off which will refill the reservoirs. The process is monitored to avoid rapid fluctuations which could be harmful to lake ecology. The main environmental concerns are the fall spawning fish and the furbearing animals.

**Winter watch**

Throughout the winter months security checks are carried out along the length of the canal. These checks called winter watch are an inspection of the canal structures to determine and to alleviate possible problems. The most common problem is the build-up of ice around structures. Ice can heave, break or crack structures, creating a threat to canal operations during the navigation season.

**Maintaining water levels**

Water removed from the canal system through the consumptive effects of natural evaporation, canal operations, hydro-electric power generation and water supply to urban centres, must be replaced to ensure continued operation through the navigation season. The reservoir lakes which contain large volumes of water in storage supply most of the water required. However, reservoirs or lakes have a predetermined natural water depth. The rule curve level determines the operating ranges of the lakes throughout the year except from February 1 until after freshet when flow control is in operation to fill the lakes.

Daily recording of water depths and calculations of water flows are an integral aspect of water management. At selected sites along the canal small green buildings containing specialized equipment, measure and record water depths hourly. Known as gauge houses, these buildings may contain a telemark, a line recorder and/or a record-
ing box. The line recorder produces a graph of water depth fluctuations over a 24 hour period. The telemark can be contacted by phone and through a series of beeps the water depth can be determined. The recording box is linked directly to a computer. The computer is programmed to contact the recording box at specific intervals.

All this complex equipment operates on the same principle. A measuring tape suspended from each machine with a weight and a float records the change in water levels. As well, lockmasters record water depths using oil gauges and measuring sticks called waterboards.

All recorded information is collected by headquarters where it is co-ordinated and applied to charts, giving staff the overall water management picture. Monitoring, recording and regulating water flow continues year after year, to help ensure the waters of the Rideau can meet the needs of all users.

by Craig Zimmerman

Of Steam and Stone Vol.12 No.4 June 1986
Water, Water...What do we do with all the water?

Boating, skiing, swimming - these are activities most people associate with the Rideau waterway. People do not usually realize the waters of the Rideau are controlled or managed in ways that not only supply sufficient water for navigation and recreation, but make provisions for hydro-electric generating stations, for controlling food zones and for fish and wildlife conservation. The operations staff monitor water levels daily throughout the year and control or disperse the water via waste weirs, locks and overflow dams.

There are six hydro-electric generating stations on the Rideau which are owned by various companies including the Gananoque Light and Power Company, Smiths Falls Water Commission and Ontario Hydro. The companies use water from designated reservoirs and generate power for local use.

As well, the canal’s operating staff control the water to try to avert flooding. Because there has been much urban development along the canal’s shoreline, flood aversion has become a prime concern. A major objective in managing our water is to control it so that it does not interfere or damage the fish and wildlife that inhabit the Rideau waters. During the spring, water cannot be lowered too far at designated shorelines since fluctuating levels would damage fish hatcheries during the spawning season. Furbearing animals could drown in their lodges. They could freeze if the levels are too low.

These are only a few of the factors that our operations staff deal with while trying to balance the canal corridor’s water-based needs.

by Cassandra Dean

Of Steam and Stone Vol.10 No.5 July, 1984
More Than Meets the Eye

What is the most diverse natural environment along the Rideau Canal - the mixed forests, the lakes, the swamps, the cedar groves or the marshes?

Marshes rank number one. However, initial impressions are few - cattails and more cattails, still water and noisy birds. The following is a simple guide to help unlock the complexity which lies beyond the initial impression.

Above the water surface:
The creeping rootstocks of the cattail allows this plant to form large stands or floating mats. On close inspection one will notice there are actually two kinds of cattails mixed together. Spring is a good time for easy identification. The broad-leaved variety bares its male and female flower spikes joined, while in the narrow leaved type, the flower spikes are separated on the stem. The cattail is the backbone of the marsh, providing food and shelter for many birds and animals.

There are two varieties of water lilies. The heart-shaped leaves belong to the yellow water lily or spatterdock. In late spring its yellow cup-shaped flowers appear on separate stocks. The large round leaves lying on the water's surface are those of the white water lily. In summer its fragrant white flowers dot the ponds. The long tuberous roots of these plants are a favourite muskrat food. Sometimes the skinny pineapple-like roots are seen floating, a sure sign of muskrat activity.

In the bird category, the list of marsh dwellers is extensive. Ducks such as the blue and green winged teal, the black duck and the familiar mallard are all common. The territorial red-winged blackbirds are always evident. The size of the red patches on the males help determine the extent of each bird's breeding territory. The masked yellow wren-like birds are yellow throats. These warblers can be heard calling “witchy-witchy” from among the cattails. Standing as lone sentinels, the long-legged great blue herons are actually patiently fishing for their next meal.

Many mammals are visitors to the marsh. These include mice, moles and shrews. If luck is with you, you may spot a white-tailed deer, raccoon or mink. The most common marsh mammal is the muskrat. They construct cone shaped homes out of dead cattails. Excellent camouflage don't you think?

The miniature helicopters darting through the air are dragonflies and damselflies. Close inspection will reveal there are several different kinds. These insects are mosquito lovers both during their nymph stage of development and as adults.

At the water's surface:
The carpet of brilliant green is actually millions of tiny floating plants packed together. Duckweed as its name suggests is a preferred food of many ducks.

As for animal life, let us look first at the insects. The small black bumper cars are whirligig beetles. The reason for their erratic behaviour is defense against predators and feeding. Supported by the surface film, water striders glide along effortlessly. Feeding on smaller insects, their hunting technique is interesting. Surface vibrations direct them and their two front pincer-like legs seize the prey.

On the cold-blooded side the marsh supports a variety of frogs, snakes and turtles. The largest frog is the bullfrog weighing up to 900 grams (two pounds). Their call is the distinctive “jug-o-rum”. They are green in colour like their smaller relative the green frog. However, green frogs possess ridges running down both sides of the back. The leopard frog is spotted as the name suggests. X marks the spot on the back of the tiny brownish spring peeper. Not often seen, their chorus of “peep, peep, peep” gives the spring peeper away. All the frogs are insect
connoisseurs. However, the voracious appetite of the bullfrog is much more extensive and includes just about anything it can catch and swallow.

The northern water snake is very much at home in the water. Being an excellent swimmer and diver, its menu includes fish, frogs and crayfish. This snake is thick in body, brown coloured and reaches a length of about one meter (four feet) as an adult. The commonest and most adaptable of the snakes is the garter. It is slender bodied and ranges in length up to half a meter (20 to 30 inches). The garter is dark in colour with three yellowish strips running the length of its body. Primarily a land snake, the black rat may occasionally venture to the water. It is a uniform black in colour and a large snake reaching up to a length of almost two meters (eight feet).

Three kinds of turtles are common in the marshes along the Rideau. The largest, most pre-historic looking is the snapping turtle. A bottom dweller, it feeds mainly on carp and catfish. The snapper rarely sunbathes on land, preferring to float lazily just beneath the surface. Among human circles the snapper's reputation is often that of a villain due to its size and powerful jaws. These attributes are necessary for survival since it's unable to withdraw into its shell like other turtles. The painted turtle has a series of brilliant red markings on its shell. These turtles are fond of sunbathing. Often groups of them can be seen on old logs or at the edge of cattail mat. The Blandings' is distinguished by its highly domed shell with hundreds of yellow dots and its bright yellow throat. Both the painted and Blandings' turtles are omnivorous. Their diets include minnows, tadpoles, snails and aquatic plants.

**Under water:**
The simplest method for exploring this part of the marsh is with a light coloured tray and a canoe paddle. Dip the paddle into the water and swish it around. Put some of the “green stuff” into your tray.

The rootless plants that float under water include bladderwort, coontail and waterweed. Bladderwort is carnivorous, catching tiny animals with the hundreds of sacs or bladders scattered along its stems. Coontail has thousands of filamentous leaves whirled along its stem. Waterweed with its spike-like leaves grows both free floating and rooted.

Shaking the plants over your tray will release the many invertebrates in hiding. It is easy to see where many of the ideas for horror films are born - silvery back swimmers, water boatman with their two oar-like legs, dragonfly nymph, red water mites, slender water scorpions with straw-like breathing tubes, male water bugs carrying hundreds of eggs on their backs, mosquito larva violently wiggling, caddis fly larva disguised as leaf particles. The long and closer you look the more you realize there is. A magnifying glass is a real eye opener! If you are interested in exploring another dimension of the marsh a microscope is required.

After this brief look at some of the more common varieties of marsh inhabitants there is no question that it is indeed diverse. However, with its incredible way of life there is order and balance. Each plant and animal has a specific role or niche. How each lives, survives and interacts affects another. Food chains form and grow into food webs. These and many other factors help the marsh remain a healthy and living natural community.

Marsh environments along the Rideau Canal perform many necessary functions in the broader context of our natural world. They act as filters to help maintain water quality. A marsh's vast populations of green plants produce large quantities of oxygen. With respect to the landbase, marshes act as buffer zones during high water periods. Aesthetically, the marsh environment adds another dimension to the recreational opportunities available along the waterway.

We extend an invitation to explore the marshes along the Rideau Canal and dispel those initial impressions.

*by Marian Stranak*

**Of Steam and Stone Vol.9 No. 6,7,8 July, August, September 1983**
What’s in a Name?

Have you ever wondered why a place has the name it does? Each name has a history all its own and the Rideau Canal is no exception. Names like Hogs Back Lock in Ottawa. Its name is derived from the rocky ridge that runs through the station and reminds some of the spine of the semi domesticated hogs of the 19th century frontier. Or what of Chaffey’s Lock named after the famous Chaffey family. Books have been written about them and their engineering exploits.

One name on the Rideau Canal has always been something of a mystery. Poonamalie, with its solitude and thick quantity of cool green cedar make it one of the most beautiful stations on the system. Tradition tells us a British Royal Engineer gave it its unusual name because it reminded him of his previous posting in India. The name was supposed to mean “bamboo thicket where tigers lurk”. Very romantic but hard to prove since no one had been found until recently who spoke the appropriate Indian language. Finally, with the help of Dr. Lysander, a native of India, we have a translation.

Poonamalie is really two words of the Tamil language of western India. Tamil is one of the oldest identified spoken languages. Poona means cat, malie (malia) means hill or mountain. Hence, Poonamalie means simply cat hill or cat mountain.

This is not, however, the end of the story. In the same part of India where Tamil is spoken lies the famous city of Madras. One of the city’s main streets is called Poonamalie Road. So to what was the British officer referring when he named the lockstation? A forest covered hill where cats could be found or a tree lined street on which he lived during his duty in India? That part of the question remains a mystery.

Of Steam and Stone Vol. 8 No. 10 August 27, 1982
Fig. 1

Rideau Canal historic bridge locations
Fig. 2
Examples of different bridge designs
Fig. 3
Examples of different bridge designs

1848
Warren truss

Warren truss with posts

Warren truss
double-diagonal system

Warren truss
erected at St. Peter's, 1931

Through truss bridge

Deck truss bridge

Unbalanced or single arm swing bridge

Equal or double arm swing bridge

Parks Canada - Rideau Canal Edukit
Fig. 4
Centre-bearing swing bridge design
Fig. 5,6
Rim-bearing swing bridge design

Parks Canada - Rideau Canal Edukit
Fig. 8
Kilmarnock timber kingpost truss swing bridge, centre bearing

*Parks Canada - Rideau Canal Edukit*
Fig. 9
Long Island - steel through truss swing bridge

Parks Canada - Rideau Canal Edukit
Fig. 10
Narrows – steel through truss swing bridge

Parks Canada - Rideau Canal Edukit
Fig. 11
Chaffeys - steel through plate girder swing bridge
Fig. 12
Upper Brewers - simple timber beam fixed bridge
Fig. 13
Smiths Falls, Confederation Drive – low truss fixed bridge
Fig. 14
Smiths Falls, above Detached Locks – CNR rolling lift bascule bridge
Fig. 15
Kingston Causeway - trunnion, or pivot type bascule bridge

Parks Canada - Rideau Canal Edukit
Wetlands on the Rideau

Parks Canada - Rideau Canal Edukit
Lieutenant-Col. John By

Parks Canada - Rideau Canal Edukit
From a copy of original watercolour painting by C.W. Jefferys showing construction of Ottawa Locks under the direction of Lieutenant Colonel John By, British Royal Engineers (Canadian National Hotels collection)
The Rideau Lakes Navigation Company excursion steamer “S.S. Rideau King”
August 1, 1902 (Mr. F. Fleming, Newboro)
Boaters in a round-bottomed motor boat (Rideau Canal collection)
J.P. Cockburn, watercolour on pencil. Early wilderness along the Rideau (National Archives of Canada)
Early settlement along the Rideau. J. P. Cockburn, watercolour on pen and ink (Royal Ontario Museum)
Wetlands are one of the canal corridor’s most important, but threatened natural resources.

The health of the rivers and lakes hinges on the health of the “ribbon of life” along the shoreline. Watch your wake and maintain natural shorelines.
The home of Peter Sweeney, the first lockmaster at Jones Falls, mirrors the lifestyle of Upper Canada in 1839.

Kingston Mills Blockhouse, built to house the soldiers as well as for defence.
Canal staff at Long Island opening the lock gates in essentially the same manner since 1832.

Originally built as a war-time supply route, the canal today is a major attraction for recreational boaters. Photo - Lower Brewers
Ottawa Locks displays a magnificent flight of eight locks.

Dams such as this one at Edmonds Lock are crucial for water management, ensuring safe boating and control of serious flooding.
The diversity of the canal corridor’s cultural landscapes can be protected and enhanced through wise land use and development decisions. Photo - Burritts Rapids

The canal, with its many shoreline partners, brings economic nourishment to Eastern Ontario. Photo - Rideau Canal Museum, Smiths Falls