



“Rideau Canal National Historic Site of Canada Receives World Heritage Site Designation!”



United Nations
Educational, Scientific and
Cultural Organization

Organisation
des Nations Unies
pour l'éducation,
la science et la culture



The Rideau Canal
inscribed on the World Heritage List in 2007

Le canal Rideau
inscrit sur la Liste du patrimoine mondial en 2007



Parks Canada
Parcs Canada

Canada

Description

This lesson plan focuses on the Rideau Canal National Historic Site of Canada and the nomination process undertaken to achieve UNESCO World Heritage Site designation.

This learning package includes a lesson plan, maps, worksheets, and fact sheets.

Required Resources:

- UNESCO'S Criteria for World Heritage Site Designation (page 18)
- Canada's Tentative List for World Heritage Site Designation (pages 20-21)
- Rideau Canal National Historic Site of Canada fact sheet (pages 16-17)
- Designation Criteria for the Rideau Canal (page 19)
- UNESCO World Heritage Site website: <http://whc.unesco.org>
- Rideau Canal National Historic Site of Canada website:
<http://www.pc.gc.ca/rideau>
- Parks Canada website (World Heritage Site Tentative List)
http://www.pc.gc.ca/progs/spm-whs/itm3-/index_e.asp

Curriculum Connections:

- For a complete list of curriculum connections, please go to the Teacher Resource Centre website at www.pc.gc.ca/education

Estimated Time: 300 minutes

Teacher Background – Designating a World Heritage Site

What is a World Heritage Site?

The Convention Concerning the Protection of the World Cultural and Natural Heritage (the *World Heritage Convention*, for short) was adopted by UNESCO's (United Nations Educational, Scientific & Cultural Organization) General Conference in 1972. Currently, 177 countries (known as "States Parties") have ratified the Convention, including Canada in 1976. The Convention established the World Heritage List as a means of recognizing that some places, either cultural* or natural**, are of sufficient importance to be the responsibility of the international community as a whole. By joining the Convention, States Parties pledge to care for world heritage sites in their territory and to avoid deliberate measures that could damage world heritage sites in other countries. As such, the World Heritage List serves as a tool for conservation.

The Convention is overseen by the World Heritage Committee, which is composed of 21 countries (Benin, Canada, Chile, Cuba, India, Israel, Japan, Kenya, Kuwait, Lithuania, Madagascar, Mauritius, Morocco, Netherlands, New Zealand, Norway, Peru, Spain, Republic of Korea, Tunisia, United States of America – Appointed between 2005-2007) elected by the States Parties. The Committee is supported by UNESCO's World Heritage Centre in Paris, which advises States Parties on the preparation of site nominations, organizes technical assistance on request and coordinates reporting on the condition of sites. It also coordinates emergency action to protect threatened sites and administers the World Heritage Fund. (www.pc.gc.ca/progs/spm-whs/page2_e.asp)

Parks Canada plays a very important role in the designation and monitoring of World Heritage Sites in Canada. Because of its expertise and leadership in the protection of national historical sites and national parks, the Parks Canada Agency was chosen by the federal government to be responsible for World Heritage Sites. Employees assist and guide Canadian sites that are preparing their nomination dossier and advise on conservation and protection to those that have been designated of international value.

* According to UNESCO, the following shall be considered as "Cultural Heritage"

- Monuments: architectural works, works of monumental sculpture and painting, elements or structures of an archeological nature, inscriptions, cave dwellings and combinations of features, which are of outstanding universal value from the point of view of history, art or science;
- Groups of buildings: groups of separate or connected buildings which, because of their architecture, their homogeneity or their place in the landscape, are of outstanding universal value from the point of view of history, art or science;
- Sites: works of man or the combined works of nature and man, and areas including archeological sites which are of outstanding universal value from the historical, aesthetic, ethnological or anthropological point of view.

** According to UNESCO, the following shall be considered as "Natural Heritage".

- Natural features consisting of physical and biological formations or groups of such formations, which are of outstanding universal value from the aesthetic or scientific point of view;
- Geological and physiographical formations and precisely delineated areas which constitute the habitat of threatened species of animals and plants of outstanding universal value from the point of view of science or conservation;
- Natural sites or precisely delineated natural areas of outstanding universal value from the point of view of science, conservation or natural beauty.

(Source: World Heritage in Young Hands, To Know Cherish and Act, An educational resource kit of teachers. Published in 2002 by the United Nations Educational, Scientific and Cultural Organization)

Process for Designating A World Heritage Site

A tentative list consists of properties that have the potential to meet World Heritage Site criteria for outstanding universal values. The World Heritage Committee asks State Parties to update their tentative lists to reflect both the current criteria and priorities of UNESCO. The process of updating the tentative list provides an opportunity for State Parties to identify sites that could be considered to meet the test of outstanding universal value and that respond to the priorities of the Global Strategy.

The Global Strategy for a Balanced, Representative and Credible World Heritage List aims to ensure that the list reflects the world's cultural and natural diversity of outstanding universal value. The Global Strategy broadens the typical definition of World Heritage to include and protect sites that are outstanding demonstrations of human coexistence with the land as well as human interactions, cultural coexistence, spirituality and creative expression. Furthermore, the strategy encourages countries to prepare "tentative lists" and to prepare nominations of properties from categories and regions currently not well-represented on the World Heritage List.

(<http://whc.unesco.org/en/tentativelist/>)

Revising the tentative list is also an opportunity to examine sites in the context of the conservation work that has been carried out in the past two decades, so that the very best candidates can be put forward for consideration. Tentative Lists are revised approximately every 10 years.

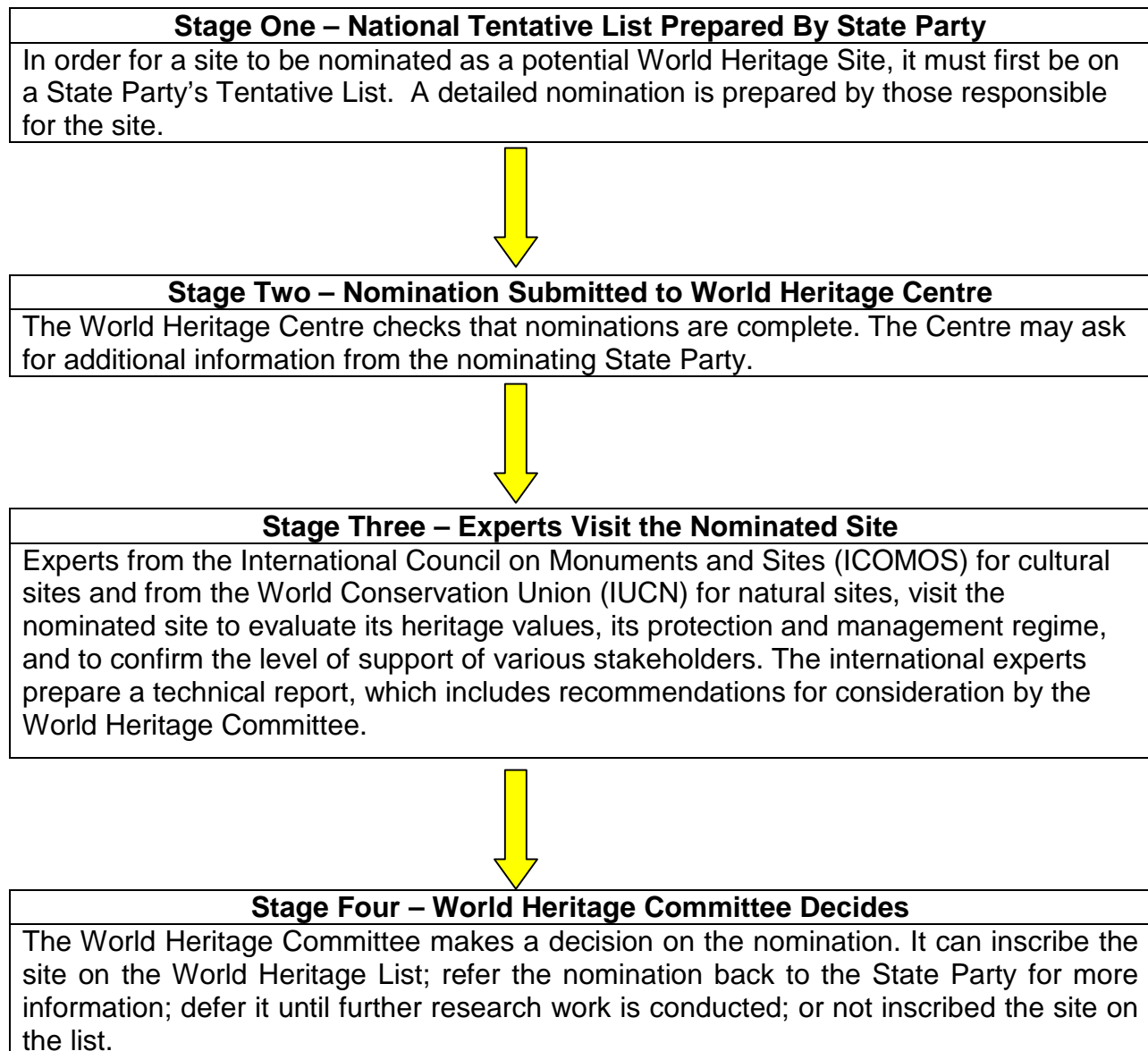
Canada's Tentative List

Stakeholder support is a key consideration in Canada. A site which is nominated for having potential to obtain World Heritage Site designation has to have the support of the organization responsible for the site, in addition to the respective provincial/territorial government, and, where relevant, Aboriginal groups. This support is based on an understanding of the implications of inscription.

In order to provide sound scientific information, research reports on natural and cultural heritage are prepared by two independent, internationally respected Canadian experts

who are familiar with World Heritage policies and guidelines. The two research reports provides an assessment of potential Canadian sites in light of the World Heritage criteria and the priorities outlined in the Global Strategy. The sites assessed include those suggested by Canadians during the past two decades as potential candidates for the World Heritage List, as well as other sites that appear to meet the criterion for “*outstanding universal value*”. (http://www.pc.gc.ca/progs/spm-whs/page7_e.asp)

How does UNESCO decide which site receives World Heritage Site designation?



The timeframe from the reception of a nomination by the World Heritage Centre to the Committee’s decision is at least 18 months. (Source: http://www.pc.gc.ca/progs/spm-whs/page4_e.asp)

Teacher Background - Rideau Canal National Historic Site of Canada

The Rideau Canal and its National Significance

The Rideau Canal is a chain of lakes, rivers and canal cuts winding 202 km from Kingston, at the head of Lake Ontario, to Ottawa, Canada's capital city.

The Rideau Canal received national historic site designation in 1924, and the Rideau River and the Cataraqui River received Canadian Heritage River status in 2000. The Rideau Canal is currently operated by Parks Canada to preserve and present the canal's natural and historic features, as well as to provide a navigable channel for pleasure craft vessels (e.g. houseboats, canoes, powerboats, etc.).

History

The Rideau Canal was built in response to the tensions that existed between Great Britain and the United States of America, which erupted in armed conflict with the outbreak of the War of 1812. During the war, the inadequacy of the St. Lawrence River became increasingly apparent. Not only was travel on the river exceedingly slow and costly, but also the river itself was exposed to American attack along most of its length between Montreal and Lake Ontario. British authorities were determined to prevent such a situation from arising and developed the concept of a military canal linking the Ottawa River and Lake Ontario.

Following the War of 1812, surveys were undertaken to identify a second, safe route from Montreal to the Great Lakes. The decision was to follow the Ottawa River from Montreal to the mouth of the Rideau River, then travel south along the Rideau River through a series of small lakes to the Cataraqui River which emptied into Lake Ontario at Kingston. Unfortunately, the route selected was navigable only in parts and to use it for boats larger than a canoe necessitated the construction of a series of locks between Ottawa and Kingston (to increase and control water levels). Given the expense of such an undertaking, the project had little enthusiasm with the British authorities, especially since relations with the United States were not as tense after the War of 1812.

A champion for building a canal arose in the Duke of Wellington, famous as the victor over Napoleon at the battle of Waterloo and an influential voice in British politics. The result of his support was the appointment of Lieutenant-Colonel John By of the Royal Engineers to oversee the task of making the Rideau-Catarqui route into a navigable waterway.

Colonel By arrived in Canada in 1826 and established his headquarters near the mouth of the Rideau River. This settlement was known for many years as Bytown, which over time was renamed as Ottawa. The overall design of the canal involved a series of dams

and associated locks to enable boats to travel without impediment from Bytown to Kingston. The original design for the canal identified the construction of locks that could handle small barges. With considerable foresight, Colonel By boldly advocated a system of much larger locks. He finally persuaded his superiors to authorize the construction of locks with minimum size of 40.8 m long and 10.1 m wide, large enough to accommodate the steamboats that were beginning to appear on the Great Lakes.



Lt. Col John By
© "C.K.", Royal Engineers Museum

Work began on taming the rivers in 1827. Colonel By and a small contingent of Royal Engineer officers designed the Rideau Canal and supervised the project. The actual construction work was contracted out to private individuals. Most of the locks and dams were built of stone quarried on site, while the necessary iron fixtures were forged by local blacksmiths.

The labourers who dug the lock pits, hauled the stones, and built the dams and locks, were drawn from two main sources. Many came from the only major populated area in the country, the French-Canadian settlements of Lower Canada. Others were recruited immigrants – mostly from Ireland - who were beginning to arrive in Canada in ever-increasing numbers. Tragically, new recruits were always needed to replace workers who died from malaria, which was contracted from many swamps along the canal route, and other causes related to the dangerousness of their work. After five laborious years, the Rideau Canal was officially opened in the summer of 1832. It was an achievement of international magnitude.

For most of its 202 km length, the new canal passed through an unsettled wilderness where By and his workers managed to construct forty-seven locks, some of them posing considerable engineering challenges. Due to its military role, the canal also included defences in the form of fortified lock master houses and blockhouses at the lock stations most exposed to possible enemy attack. Considering what was accomplished through this project, the financial cost was relatively low: £800, 000. But far from applauding the achievement, the British Parliament of 1832 expressed its shock at the expenditure of such a sum of money and recalled Colonel By to face a parliamentary inquiry into his activities. While intensive investigation absolved Colonel By of any kind of mismanagement, he never received the honours his achievement should have earned him. He retired to private life, and died a disappointed man in 1836.

Although it was constructed as an alternate route to the St. Lawrence River in case of war, the new Rideau Canal was easier to navigate than the St. Lawrence River (due to its series of dangerous rapids between Montreal and Kingston). As a result, the Rideau Canal became a busy commercial artery from Montreal to the Great Lakes. However, by 1849, the rapids of the St. Lawrence had been tamed by a series of locks and commercial shippers were quick to switch to this more direct route.

The Rideau Canal's heyday as a busy national highway ended in the 1850s, but the region it passed through remained ill-served by roads and railways until after the First World War. As a result, the Rideau Canal continued to be an important local transportation system.

After the First World War commercial traffic disappeared from the Rideau Canal. It was no longer of value for military, commercial or transportation purposes. The only reason the Rideau Canal was not abandoned was because of the high costs associated with dismantling it. Prior to the decline of local commercial traffic, a new role for the Rideau Canal had emerged.

The natural beauty of the area through which the canal passes, along with the promise of excellent sports fishing, hunting and recreational boating stimulated the development of the tourism industry in the area and, by the end of the 19th century, hotels and private cottages made their appearance along the canal route. The years since then have seen a massive expansion of the recreational use of the Rideau Canal.

In more recent times, the historical importance of the canal has been recognized. Declared by the Historic Sites and Monuments Board of Canada to be of national historic significance, the Rideau Canal, North America's oldest continuously operating waterway, attracts thousands of visitors every year, anxious to learn about this remarkable engineering achievement and its role in the development of Canada.

Location of the Rideau Canal

From Lake Ontario in Kingston, the Rideau Canal begins its ascent from Lake Ontario, along the Cataraqui River system (total lift from Lake Ontario to the top of Kingston Mills is 14.26 metres or 46.8 feet). It passes through the Cataraqui Marsh, an extensive wetland in the St. Lawrence Lowlands. At Kingston Mills (the most southerly lock station), boats climb the flight of locks, past towering granite cliffs, onto the Frontenac Axis, part of the rugged Canadian Shield. From lake to lake, the canal rises to its highest point, near Newboro, in Upper Rideau Lake (total lift from Lake Ontario to Newboro is 91.44 metres or 300 feet).

At the summit, the scenery changes. The canal gently descends through the Rideau Lakes and the Rideau River. It passes through farmlands of the Smiths Falls limestone plain and meanders through shallow marshes, alive with birds and wildlife.

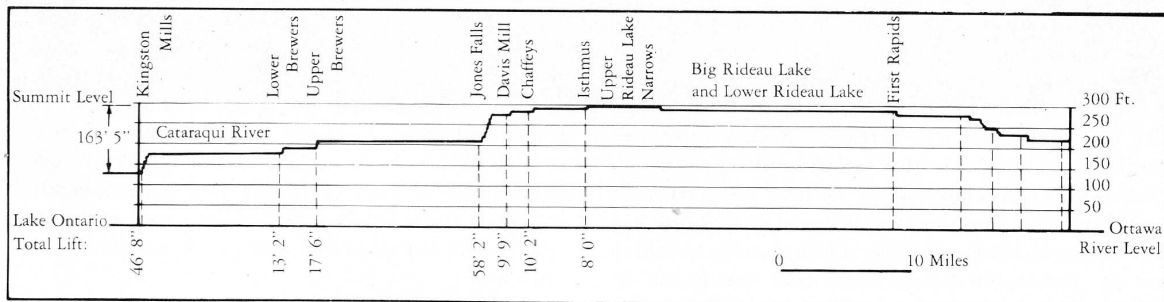
The architectural heritage of the neighboring towns and villages reflect over 165 years of canal history, which includes country hospitality and numerous festivities for visitors to enjoy.

The remaining portion of the canal provides a pleasant transition along the Rideau River from rural Ontario to the urban setting of the Nation's Capital. From Hogs Back to the Ottawa River, the canal forms the heart of Ottawa's parkland, culminating in the majestic staircase of eight locks at the foot of Parliament Hill.

Lockmasters and their staff continue the tradition of hand-operating 44 of the 47 locks along the waterway, using the original equipment dating back to the 1800s. The three exceptions are Newboro, Smiths Falls Combined and Black Rapids, which are operated electrically. The locks can accommodate boats up to 27.4 meters (90 ft.) in length and 7.9 meters (26 ft.) in width.

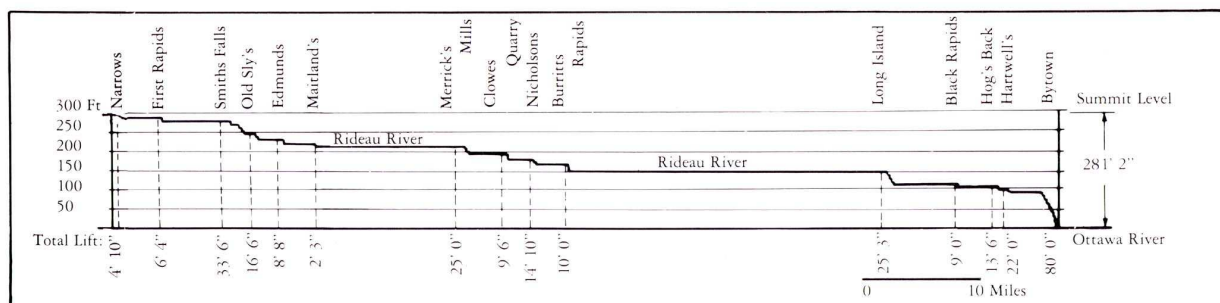


Ottawa Locks
© Parks Canada



Elevation of the Rideau Canal, Cataraqui Section

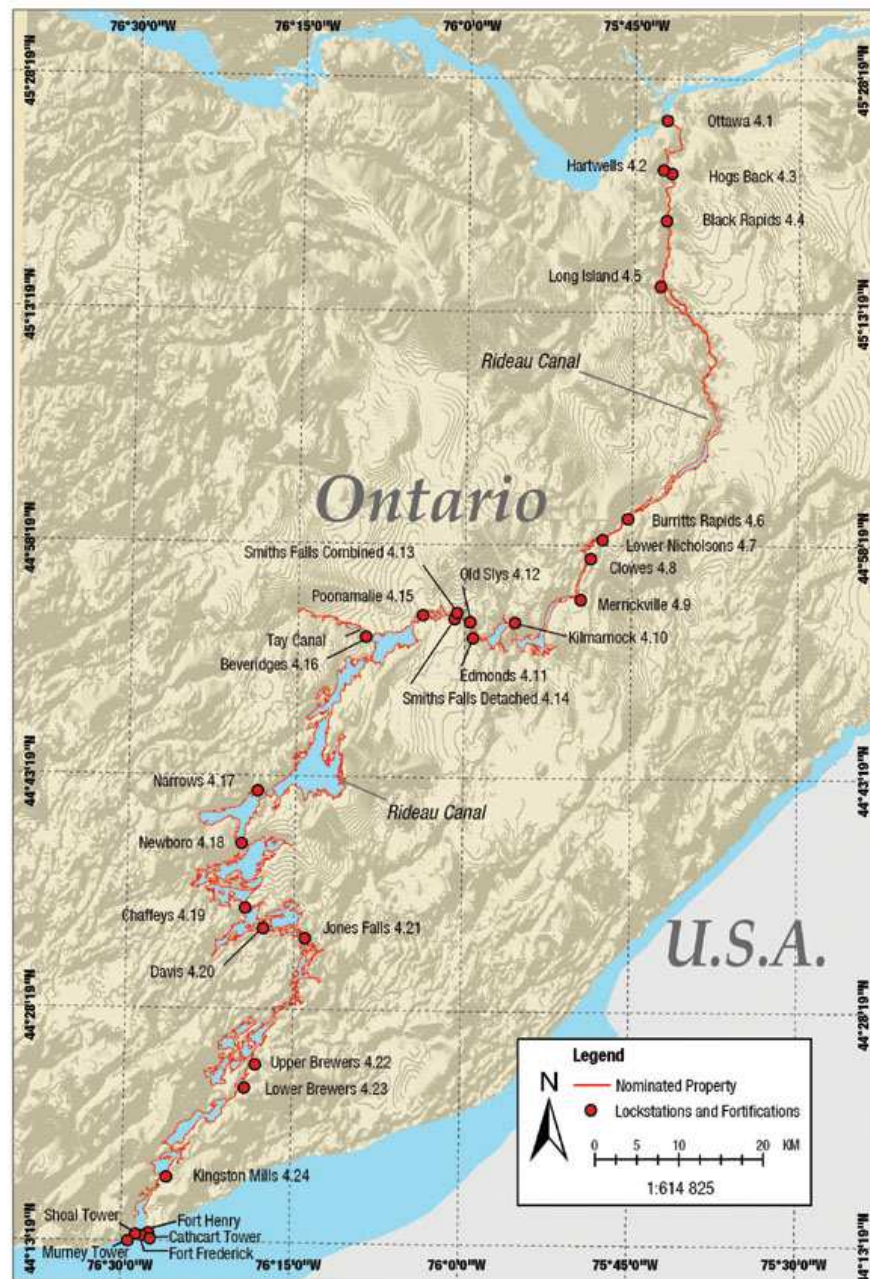
S. Epps
Parks Canada



Elevation of the Rideau Canal, Rideau Section

S. Epps
Parks Canada

MAP 4 SERIES - INDEX - RIDEAU CANAL



Map of the Rideau Canal
© Parks Canada

Lesson Plan Outline

Part One – What Is A World Heritage Site?

- A. Working in pairs, have your students research UNESCO's website (<http://whc.unesco.org>) to find information to define both a natural and a cultural site. (approx. 20 minutes)
- B. Have the students list and describe two natural and two cultural world heritage sites located in Canada. (approx. 15 minutes)
- C. From the list below, assign a country to each pair of students and ask them to research a cultural world heritage site located in that country. Have the students complete Worksheet #1 (page 14). Using the information they compiled, ask the students to prepare a short 3-minute PowerPoint presentation, or poster board, describing the location and international importance of the world heritage site they selected. (approx. 40 minutes)

Suggested Countries (for others, please go to: <http://whc.unesco.org>)

Austria	Egypt	Mexico
Brazil	France	Portugal
China	Greece	Russian Federation
Czech Republic	India	Spain
Denmark	Italy	Sweden

- D. Following the presentations, discuss the purpose and importance of world heritage sites. As a class, create your own definition of what a World Heritage Site is. How does the class definition compare to UNESCO's definition? What are the similarities? (approx. 10 minutes)

Part Two - The Rideau Canal Example

- A. Have the students read the fact sheet entitled, "The Rideau Canal National Historic Site of Canada" (pages 16-17). While reading the fact sheet, ask the students to write down what they feel are the significant cultural features of the Rideau Canal. As a class, discuss why the Rideau Canal is an important piece of Canadian heritage. (approx. 15 minutes)
- B. Distribute the fact sheet entitled, "UNESCO's Criteria for World Heritage Designation" (page 18) to each student. Working in small groups, ask the

students to discuss and identify which criterion they feel the Rideau Canal meets to justify designation as a World Heritage Site. What characteristics of the Rideau Canal are considered to be of “outstanding universal value”? Share the “Designation Criteria for the Rideau Canal” sheet (page 19) with your students. Compare the actual nomination criteria that was submitted to UNESCO with the answers the class provided. (approx. 20 minutes)

Part Three - Selecting A Place to Designate as a World Heritage Site

- A. Students will work in small groups to determine a natural or cultural place in Canada to nominate for World Heritage Site designation.

NOTE TO TEACHERS: the reference sheet entitled, “Canada’s Tentative List for World Heritage Site Designation” (pages 20+21) is provided for your students as suggested sites for their project. Students may choose a place not currently listed on Canada’s Tentative List. You may want to encourage students to nominate a place in a province or territory that currently does not have a world heritage site.

- B. Students are to write a short 2-3 page report justifying why their site should be nominated for World Heritage Site designation. Using the “UNESCO Criteria for Designating World Heritage Sites” reference sheet, students must identify and explain which UNESCO criterion the place meets, giving it “universal value”. (approx. 45 minutes)

The report should include:

- a provincial/territorial map (with major landmarks) showing the location of the proposed place
- visual images of the selected place
- a list of the UNESCO criteria the place meets
- a written justification for the place’s nomination.

NOTE: students may wish to use Worksheet #1 while conducting their research.

Part Four - The World Heritage Site Debate (approx. 75 minutes)

Your classroom will now become the World Heritage Convention! A panel of five to seven members (may be students, teachers, parents, etc.) representing one of the 21 state parties on the current World Heritage Committee will officially designate two places as World Heritage Sites.

Using the same groups from Part 3, each group selects one or two members to deliver a 5-minute presentation on their proposed Canadian world heritage site. The presentation needs to be convincing, insightful and most importantly, demonstrate why this place is of value to Canada and the world.

Provide copies of the Evaluation Sheet (page 15), to each judge for evaluating the presentations. When making its decision, the panel will consider:

- how convincing the presenters were
- how strongly the proposed site meets UNESCO's Criteria for World Heritage Designation, and
- why this place is of universal value.

Worksheet # 1

Name of the Cultural World Heritage Site: _____

Geographic Location (City/Region/Country): _____

Date of Inscription onto the World Heritage List: _____

Unique Cultural Features

Universal Value of the Site

List of sources used (e.g. websites, textbooks, maps, etc.):

Evaluation Sheet For World Heritage Committee Members

Name of Presenter(s) : _____

Group Participants: _____

Name of Proposed Site: _____

Learning Skill	Superb Performance (80-100%)	Sound Performance (60-79%)	Weak Performance (50-59%)
Knowledge/ Understanding	Demonstrates a high level of research; detailed understanding of UNESCO's world heritage site program and the proposed site.	Demonstrates an adequate level of research: adequate understanding of UNESCO's world heritage site program and the proposed site.	Demonstrates a low level of research; unclear understanding of UNESCO's world heritage site program and the proposed site.
Thinking/Inquiry	Demonstrates a high level of creativity in presentation design and selection of proposed site.	Demonstrates an adequate level of creativity in presentation design and selection of proposed site.	Demonstrates a lack of creativity in presentation design and selection of proposed site.
Communication	Communicated information in a very clear and concise manner; visuals are of high quality, strong oral skills.	Communicated information effectively; visuals are of adequate quality; good oral skills.	Communicated information in an unorganized manner; visuals of poor quality; oral skills are weak.
Application	Applies knowledge and skills very effectively; presentation is very convincing.	Applies knowledge and skills with considerable effectiveness; presentation is somewhat convincing.	Applies knowledge and skills with limited effectiveness; presentation is not very convincing.



Rideau Canal National Historic Site of Canada

Fact Sheet

The Rideau Canal is a chain of beautiful lakes, rivers and canal cuts. Winding its way through varying landscapes, it stretches a distance of 202 km from Kingston, at the head of Lake Ontario, to Ottawa, Canada's capital city.

One of Canada's historic canals and a Canadian Heritage River, the Rideau Canal National Historic Site is operated by Parks Canada to preserve and present the canal's natural and historic features, and to provide a navigable channel.

Significance

The Rideau Canal is the only canal dating from the great North American canal-building era of the early 19th century that remains operational along its original route and with most of its original structures intact. It was also one of the first canals designed specifically for steam-powered vessels. It is an outstanding technological achievement in terms of its ingenious design, high-quality construction and physical challenges.

History

The Rideau Canal was conceived in the wake of the War of 1812. It was to be a war-time supply route to Kingston and the Great Lakes, because the international boundary along the St. Lawrence River was vulnerable to attack. The canal provided a secure water route for troops and supplies from Montreal to reach the settlements of Upper Canada.

In 1826, England sent Lieutenant Colonel John By of the Royal Engineers to supervise canal construction. Thousands of Irish Immigrants, French Canadians and Scottish stonemasons were among the laborers who helped push the canal through the rough bush, swamps and rocky wilderness of Eastern Ontario.

Completed in 1832, the Rideau Canal was one of the greatest engineering feats of the 19th century. The Rideau Canal is a masterpiece of human creative genius, in its concept, design, and engineering. To build the canal, Lieutenant-Colonel John By, envisioned the joining of the Rideau and Cataraqui river systems using a slackwater system*. His decision to build a slackwater canal was highly innovative and technologically risky. This system was untried at this time in Europe and had been attempted in North America on a limited scale.

* Slackwater system = high dams raise the water level to flood the rapids and back up the water to a navigable depth. The construction of a slackwater system complicated the surveying task but it reduced excavation work immensely.



Rideau Canal National Historic Site of Canada

Fact Sheet (cont.)

The Rideau Canal was built as a military canal and, for several decades, was an important element in the defence of Canada. It had, however, never been thought of as having an exclusively military function, and soon after it opened, the canal was carrying much of the commercial traffic that had previously used the St. Lawrence River.

The Rideau Canal has opened for navigation every year since 1832. It was built during the great canal building era of the 19th century and has survived intact to modern times making it the oldest operating canal in North America. To visit the Rideau Canal is an experience in both the natural environment and the history of this part of Canada. The transportation route and the access of water power created by the arrival of the canal, led to immigration, settlement, and the development of early industries.

In June 1924, the Historic Sites and Monuments Board of Canada adopted the resolution *“that the construction of the Rideau Canal be declared an event of national importance.”* In 1926, the Canal was commemorated through a Board-approved plaque. It states:

“This tablet commemorates the hundredth anniversary of the beginning of the construction of the Rideau Canal in September, 1826, under the direction of Lieutenant Colonel John By: R.E., connecting the Ottawa River with Lake Ontario for ship navigation, thereby, laying the foundation of the City of Ottawa and advancing the development of Eastern Ontario.”

For nearly 175 years, the Rideau Canal has continued to serve, without interruption, as a water route between Ottawa and Kingston. This is a tribute to the high construction standards that John By insisted upon during its building and the fact that it has been well maintained over the years.

Setting

From Lake Ontario at Kingston, the Rideau begins its ascent of the Cataraqui River system. It passes through the Cataraqui Marsh, an extensive wetland in the St. Lawrence Lowlands. At Kingston Mills, boats climb the flight of locks, past towering granite cliffs, onto the Frontenac Axis, part of the rugged Canadian Shield. From lake to lake, the canal rises to its highest point, near Newboro, in Upper Rideau Lake.

At the summit, the canal gently descends through the Rideau Lakes and the Rideau River. It passes through farmlands of the Smiths Falls limestone plain and meanders through shallow marches, alive with birds and wildlife. The remaining portion of the canal provides a pleasant transition from rural Ontario to the urban setting of the Nation's Capital. The canal forms the heart of Ottawa's parkland, culminating in the majestic staircase of eight locks at the foot of Parliament Hill.

For further information, visit: www.pc.gc.ca/rideaucanal

UNESCO's Criteria For World Heritage Site Designation

- i to represent a masterpiece of human creative genius;
- ii to exhibit an important interchange of human values, over a span of time or within a cultural area of the world, on developments in architecture or technology, monumental arts, town-planning or landscape design;
- iii to bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared;
- iv to be an outstanding example of a type of building, architectural or technological ensemble or landscape which illustrates (a) significant stage(s) in human history;
- v to be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change;
- vi to be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic and literary works of outstanding universal significance. (The Committee considers that this criterion should preferably be used in conjunction with other criteria);
- vii to contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance;
- viii to be outstanding examples representing major stages of earth's history, including the record of life, significant on-going geological processes in the development of landforms, or significant geomorphic or physiographic features;
- ix to be outstanding examples representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals;
- x to contain the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation.

Source: <http://whc.unesco.org/en/criteria/>

Designation Criteria for the Rideau Canal

Criterion (i): The Rideau Canal is a masterpiece of human creative genius.

Through a fundamental stroke of creative genius, Lieutenant-Colonel John By of the Royal Engineers envisioned the creation of a slackwater* canal on a monumental scale. This approach was highly innovative – and technologically risky. The slackwater system was virtually untried at this time in Europe. Slackwater techniques on a limited scale had been attempted in North America, but none of these canals was near the complexity of what John By conceived for the Rideau Canal.

* Slackwater system = high dams raise the water level to flood the rapids and back up the water to a navigable depth. The construction of a slackwater system complicated the surveying task but it reduced excavation work immensely.

Criterion (iv): The Rideau Canal is an outstanding example of a technological ensemble, which illustrates a significant stage in human history.

One of the very few canals in the world built primarily for strategic military purposes, the Rideau Canal and its associated defensive works were built at a time when Great Britain and the United States of America vied for control of the northern portion of the North American continent.

Selected Sites from Canada's Tentative List For World Heritage Site Designation

To find the complete Canadian Tentative List for World Heritage Site designation visit http://www.pc.gc.ca/progs/spm-whs/itm3-/index_e.asp

Grand-Pré National Historic Site (Nova Scotia)

Criteria iii, iv, vi

Grand-Pré is the symbolic centre of the homeland of the Acadian people and the principal *lieu de la mémoire acadienne*. Here they transformed millennia-old tidal salt marshes into fertile farmland, the granary of *Acadie*. The tragic deportation of the Acadians in 1755 from the lands they had physically created through hard work and ingenuity is marked by the memorial chapel (1922-1930), the Deportation Cross (1924), the bronze statue of Evangeline, the heroine of Henry Wadsworth Longfellow's romantic poem *Evangeline* (1920), and other monuments. Below-ground archaeological remains also represent the occupation and the collective memory. The area still bears the distinct settlement and land use patterns of dyked marshlands, uplands, and forest rising from the bay that identified their prosperous agricultural settlement from 1682 to 1755, as well as vestiges of the unique Acadian adaptation of 17th-century French dyking practice to the salt marshlands. The overlay of cultural resources reflecting the deliberate settlement of New England Planters on the Acadian lands immediately after The Deportation remains visible. (<http://www.pc.gc.ca/grandpre>)

Gwaii Haanas National Park Reserve (British Columbia)

Criteria iii, v, vi, ix, x

In few other places in the world can one experience such a diversity of life and habitats from undersea kelp forests, to old-growth rain forests. As one of the few places in Canada not covered by glaciers during the most recent Ice Age, Gwaii Haanas retains a unique assemblage of species, many endemic to the Queen Charlotte Islands. Tucked on shore-line cliffs are some of the largest seabird colonies and sea lion rookeries known. The invertebrate life in the intertidal and subtidal zones is highly diverse, and the habitat supports migrating shorebirds and marine mammals, including killer whales and migrating grey whales. Traditional homeland of the Haida, the area includes remnants of houses and carved mortuary and memorial poles, commemorating the culture of the Haida and their close relationship with the land and sea. Like the mist that permeates the forest, the rich culture of the Haida infuses Gwaii Haanas. The existing SGaang Gwaii World Heritage Site would be incorporated into this broader proposal. (<http://www.pc.gc.ca/gwaiihaanas>)

Ivvavik National Park / Vuntut National Park / Hersel Island (Yukon)

Criteria iv, v, vii, viii, x

The, Ivvavik, Vuntut and Herschel Island site is a land rich in wildlife, in variety of landscape and in vegetation. Vuntut National Park of Canada includes part of the Old Crow Flats, a vast area of lakes, ponds, wandering rivers and sodden tundra that is recognized to be of global importance for breeding and migratory waterfowl. The chorus arising from the flats on a spring morning is as unforgettable as the stillness of the flats on a winter night. North of the flats in Ivvavik National Park of Canada lie the Richardson Mountains, home to Dall sheep, moose and among the highest concentrations of grizzly bears known. On the tundra plains bordering the Beaufort Sea, the Porcupine Caribou Herd, one of the largest herds of migratory ungulates in the world, wanders on its seasonal migrations. Herschel Island Territorial Park (Qikiqtaruk) protects a unique combination of natural and human heritage and was Yukon's first territorial park. The entire area was bypassed by the Pleistocene glaciers, as evidenced by palaeontological and archaeological sites which include some of the best-preserved assemblages of ice-age fauna, and some of the oldest human remains yet discovered in the Western Hemisphere. (<http://www.pc.gc.ca/ivvavik>)

Red Bay National Historic Site (Newfoundland and Labrador)

Criteria iii, iv, v

In Red Bay are found underwater and terrestrial archaeological sites representative of a 16th century Basque whaling station in North America. They contain archaeological evidence of all the major elements of Basque whaling and associated activities, including tryworks, cooperages, workshops, dwellings, wharves, burial sites and lookouts. Submerged cultural resources include the well-preserved remains of a number of vessels that illustrate 16th century Iberian technology, including three whaling ships, two chalupas and a pinanza. No known Dutch, English, or Basque whaling station equals Red Bay in the number and completeness of cultural resources illustrating the whaling industry technology of this period. (<http://www.pc.gc.ca/redbay>)

The Klondike (Yukon)

Criteria iv, v

The history of the Klondike is written on the land. First Nations story cycles speak to thousands of years of surviving and thriving in a challenging environment, and to a remarkable record of adaptation and innovation. These stories also speak to a way of life that was radically and indelibly altered by a brief moment on the timeline of the region's human occupation — the Klondike Gold Rush of 1896-1898, and its aftermath. Early narratives are found throughout the traditional territories, including the Tr'ochëk fishing camp and ancient trading routes such as the Chilkoot Trail; later voices overlay the Chilkoot and the still-mined gold fields, and the historic districts of Dawson and Skagway, Alaska (U.S.A.). Collectively, the places and cultural accommodations that define the Klondike cultural landscape represent a story of extraordinary proportions. (<http://www.pc.gc.ca/klondike>)