

Unit Plan: Erie Canal (4th Grade)

Introduction/Rationale

This unit plan is intended to provide students with a comprehensive overview of the building of the Erie Canal. The building of the Erie Canal was a very important turning point in our nation's history. Studying this event will give students an appreciation for the dramatic geographic and economic changes that occurred in United States following our victory in the Revolutionary War. The Erie Canal played a crucial role in the Westward Expansion of the United States during the Nineteenth Century as it finally created an efficient trading route through the Appalachian Mountains. Prior to the Erie Canal, commerce and trade with the Western Territories was primarily routed through the Mississippi River because the Appalachian Mountains were such a formidable natural boundary. After the Erie Canal was built, it created an east/west trading passage that dramatically lowered transportation time and costs, which helped enable Westward Expansion.

Another rationale for studying the Erie Canal is because it is a relevant part of the 4th grade curriculum for New York State, and for good reason. The Erie Canal had a tremendous impact on the development of New York City and State. DeWitt Clinton had a grandiose vision for the canal which ultimately came true as the port of New York City quickly became the largest port in the United States after the canal opened. This tremendous economic activity led to a multi-decade population explosion as people from around the world were drawn to New York City for the opportunity it presented. However, at the time building the canal required tremendous political perseverance by DeWitt Clinton and other canal supporters, as well as incredible physical sacrifices on the part of the immigrants who constructed it. Studying the Erie Canal will provide students with a better appreciation for the great city and state in which we live.

According to the New York State Education Department (NYSED) web site (www.nysed.gov), the Unit plan I have created will addresses Standard 1 of the New York State Social Studies Standards: History of the United States and New York. Additionally, according to the New York State Core Studies Curriculum that has been created by the NYSED, my Unit plan will address the 4th grade concepts/theme of Technology, Change and Human Systems. These concepts/themes include the content understandings of transportation, inventions, communication and technology as well as the geographic influences of industrialization and expansion (e.g., the interactions between economic and geographic factors).

Discussion of Content

Prior to this semester, I frankly never gave the Erie Canal a second thought. However, early in the semester, I made an initial connection to the Erie Canal during a Geography course. The more I learned about the Erie Canal, the more fascinated I became with the topic because of the impact that it had on the development of our country and state. As I discussed the topic with friends and family, I was perplexed by the fact that so many people had no idea that the

Erie Canal was perhaps the single most influential factor in the development of New York City into the world's most important city. This made me think back to our class readings which spoke of our responsibility as educators to bring the subject of history "alive" by connecting it to our present day lives (Levstik & Barton, 2005).

Classroom discussions and personal conversations with Professor Cantos further fueled my desire to learn about the Erie Canal. In order to strengthen my knowledge in the subject, Professor Cantos recommended the book *Wedding of the Waters*, by Peter L. Bernstein. Reading this book gave me an even deeper appreciation of how important a transportation bypass for the Appalachian Mountains was to enabling the Westward Expansion of the United States during the Nineteenth Century. Reading this book, I discovered that shortly after the Revolutionary War, George Washington first championed the idea of a building a canal to the west using the Potomac River. Ultimately the failure of this project created a lot of political objection to DeWitt Clinton's grand plan of building a canal from Lake Erie to the Hudson River. In fact, when presented with the idea of funding the project with federal money in 1809, President Thomas Jefferson scoffed at the request stating that it was "short of madness" (Bernstein, 2005) to think that anyone could build a 350-mile canal in light of Washington's failures. Driven by a vision of the positive economic impact that the canal would have on New York City and State, DeWitt Clinton persevered through tremendous political objection to secure \$7 million from the New York State Assembly in 1817. The canal was built over eight years, mainly through the grit of Irish immigrants who dug the 363-mile canal trench that was 40 feet wide and 4 feet deep.

Upon opening in 1825, the impact of the Erie Canal was immediate and dramatic as settlers poured out west (New York State web site). The explosion of trade predicted by Governor Clinton began, spurred by freight rates from Buffalo to New York of \$10 per ton by canal, compared with \$100 per ton by road. In 1829, there were 3,640 bushels of wheat transported down the canal from Buffalo. By 1837, this figure had increased to 500,000 bushels; four years later it reached one million. In nine years, canal tolls more than recouped the entire cost of construction (New York State web site). Within 15 years of the canal's opening, New York was the busiest port in America, moving tonnages greater than Boston, Baltimore and New Orleans combined (New York State web site).

Unit Plan Discussion

The objective of my unit plan is to provide students with an in-depth understanding of: 1) why the Erie Canal was needed to enable Westward Expansion; 2) the political challenges in getting it constructed; 3) the tremendous sacrifices that were made by immigrants to build the canal; and 4) how its completion played a critical role in: a) the geographic and economic direction of our nation; and b) the rapid development of New York City and State. While building the Unit plan, I kept in mind the fact that good teaching "focuses on helping students learn important organizing ideas, rather than simply covering massive amounts of factual information" (Levstik & Barton, 2005).

I structured the unit plan so that the content gets progressively more sophisticated as the week goes on. Additionally, each new lesson is connected to the prior day's lesson and the Day 5 assessment activity connects all of the lessons together by having the children refer back to prior work in order to create a comparison chart. I used constructive evaluation exercises in my Unit plan in order to get a "picture of how the schematic process is going, rather than assessing whether students have 'caught' discrete pieces of factual information" (Levstik & Barton, 2005).

Specifically, in Day 1, I will get students to understand the geographic reason why canals are needed and how they work structurally. After studying a diagram of a canal together, I will have them work in groups to create advertisements for a canal company citing how their canals work and what they are used for. On Day 2, I will show a short internet movie on the Erie Canal followed by a K-W-L in order to record what the class learned about the canal as well as provide motivation for future lessons. For the Day 2 assessment, students will write a letter to a friend in Europe outlining basic facts about the Erie Canal and the reason why it was needed for the Westward Expansion of the United States.

In Day 3, which is my expanded lesson plan, I crank up the intensity level and bring the focus to New York. I will start the lesson with a conversation on what students know about New York City and steer the discussion toward the importance of New York City (e.g., largest city in the country, financial capital of the world, Wall St., Central Park, etc...). As we conclude the discussion, I will ask the students if they know how New York City became such an important city. I will record all of the answers from our discussion on chart paper. Having piqued their interest, I will then have the children perform a play called *An Erie Situation*, which I wrote for this Unit plan. After the play, I will lead a discussion on how the Erie Canal impacted New York City. The children will use this information to write a letter in the voice of DeWitt Clinton to the New York State Assembly arguing why a canal from Lake Erie to the Hudson River would benefit New York City.

Day 4 will be dedicated to giving students an appreciation for the sacrifice that immigrant workers made to build the canal. I will do a Read Aloud of some pages from the historical fiction book *Desperate Journey*, which describes what life was like for workers that built the canal. Afterward, I will lead a discussion on what we learned about the working conditions and record the class responses on chart paper. For the Day 4 assessment, children will create a journal entry in the voice of an immigrant worker describing the conditions of working on the canal.

Finally, on Day 5, I will get the students to connect all of the information that they learned over the prior four days. I will start with a Read Aloud of the book *River of Dreams*, pausing after each page to allow students to take notes on the impact of the Erie Canal on the United States. For the Day 5 assessment, students will use these notes and the work that they created in prior lessons to create a before and after chart that highlights the key economic and geographic changes in the United States that resulted from the building of the Erie Canal.

Erie Canal Unit Plan Overview: 4th Grade

Monday	Tuesday	Wednesday	Thursday	Friday
<p>Day 1: What's a Canal?</p> <p><u>Objective</u> Students will be able to understand the basic structure of canals and why they are needed.</p> <p><u>Motivation/Activity</u> Project a diagram of a canal system up on the SMART board (identify and explain locks, gates and aqueducts). Use example from <i>The Amazing Impossible Erie Canal</i> by Cheryl Harness. Also, read the next page which describes why canals are needed.</p> <p><u>Assessment</u> In groups, students will create an advertisement for a canal building company noting how canals work and what they can be used for.</p>	<p>Day 2: Erie Canal Overview</p> <p><u>Objective</u> Students will be able to recall basic facts and figures about the Erie canal as well as the rationale for why it was built.</p> <p><u>Motivation/Activity</u> Show web movie on Erie Canal: http://www.epodunk.com/routes/erie-canal/start.html</p> <p>After movie, do K-W-L chart to record facts learned and provide motivation for future lessons.</p> <p><u>Assessment</u> Students will write a letter to a friend in Europe describing the Erie Canal and why it was needed in the U.S. for Westward Expansion.</p>	<p>Day 3: The NYC Plan</p> <p><u>Objective</u> Students will be able to assess why the building of the Erie Canal was critical to the development of New York City.</p> <p><u>Motivation/Activity</u> Students will act out the short play <i>An Erie Situation</i> (created by Jeff Ignall).</p> <p>Following the play, lead a class discussion on benefits of the Erie Canal for New York City and record the main points on chart paper.</p> <p><u>Assessment</u> Students will write a letter in the voice of DeWitt Clinton to the NY State Assembly arguing why a canal from Lake Erie to the Hudson would benefit NYC.</p>	<p>Day 4: Building the Canal</p> <p><u>Objective</u> Students will be able to understand the sacrifices that immigrants made in building the canal.</p> <p><u>Motivation/Activity</u> Read Aloud of some pages from the historical fiction book <i>Desperate Journey</i> that describe what life was like for workers that built the canal</p> <p>Lead a discussion on building of the canal and record the main points on chart paper.</p> <p><u>Assessment</u> Students will write a journal entry in the voice of an immigrant working on the Erie Canal.</p>	<p>Day 5: Life After the Canal</p> <p><u>Objective</u> Students will be able to analyze the economic and geographic changes that the Erie Canal had on the U.S.</p> <p><u>Motivation</u> Do a Read Aloud from <i>River of Dreams</i> by Hudson Talbott. Pause after each page to have students take notes on impact of Erie Canal on U.S.</p> <p><u>Assessment</u> Students will create a before and after chart that highlights the key economic and geographic changes that resulted from the Erie Canal. (Students will be allowed to use the resources from prior days to help fill out their charts).</p>

UNIT PLAN BIBLIOGRAPHY

ePodunk Web site: <http://www.epodunk.com/routes/erie-canal/start.html>.

Harness, C. (1995). *The amazing impossible erie canal*. New York: Aladdin Paperbacks.

Ignall, J. (2010). *An erie situation*.

Murphy, J. (2006). *Desperate journey*. New York: Scholastic Press.

Talbot, H. (2009). *River of dreams*. New York: G.P. Putnam's Sons.

Day 3 Lesson: The New York City Plan (4th Grade)

Purpose

Students will be able to assess why the building of the Erie Canal was critical to the development of New York City.

Materials

Copy of *An Erie Situation*, a play by Jeff Ignall; 30 copies of the Writing Assignment (Letter from DeWitt Clinton to New York State Legislature); additional reading materials on Erie Canal's impact on New York City; SMART Board; and chart paper.

BEFORE (25-30 Mins.): Assess prior knowledge, Create motivation

1. Explain that we will be talking about impact of the Erie Canal on New York City.
2. Start out with a discussion of New York City.
3. Initial Prompting Questions:
 - When you think of New York City what comes to mind?
 - What makes New York City special?
 - Why do you like living in New York City?
 - How would you compare New York City to the rest of the cities in the U.S.?
 - Has New York City always been the most important city in the U.S./world?
 - What made New York City the most important city in the U.S./world?
4. Write down student responses to New York City discussion on chart paper.
5. Next, explain that the class will be performing the play *An Erie Situation* – assign students to character roles.
6. After the play, review key vocabulary words to assess comprehension.
7. Next, have students do a one-minute turn and talk regarding the impact that the Erie Canal had on New York City.
8. After the turn and talk, I will ask students for the answers that they came up with and record them on the chart paper.

DURING (20 Mins.): Students apply new knowledge, Provide guidance, Assess progress

1. Students get their core notebooks.
2. Give the students their Writing Assignment.
3. Leave chart paper with the information we discussed at front of the class for the student's reference as they are writing their letters.
4. Walk around to answer questions, provide guidance and assess performance.
5. Higher-level writers who finish early will be given independent reading materials with more information on the Erie Canal's impact on New York City.

6. Also, identify exemplary student examples that will be shown to the class (ask students for permission to show their work).

AFTER (10-15 Mins.): Students demonstrate understanding, answer Questions and Summarize

1. Put an outstanding example of a letter up on the SMART Board.
2. Have student explain how he/she created their letter.
3. Allow other students to ask questions of the student who is sharing.
4. Summarize what we learned and see if there are questions.

Jeffrey Ignall

Writing Assignment

In your core notebook, write a letter from DeWitt Clinton to the New York State Assembly arguing why building a canal from Lake Erie to the Hudson would benefit New York City.

Annotated Sources (most useful sources are noted by an asterisk)

*Bernstein, P. (2005). *Wedding of the waters*. New York: W.W. Norton & Company, Inc.

This book was my primary source of information for the background and building of the Erie Canal. It begins in the 1780s with the efforts of George Washington to build a canal over the Appalachian Mountains using the Potomac River. After detailing its failures, the remainder of the book describes the herculean effort that went into building the canal (e.g, the surveying, the political wrangling, and finally the construction).

*ePodunk web site: <http://www.epodunk.com/routes/erie-canal/start.html>.

ePodunk is an educational web site that provides in-depth information about more than 46,000 communities around the country. According to its web site, ePodunk was founded by journalists with years of experience in newspapers, online publishing and demographics. I found an excellent web movie about the Erie Canal on the site. I will be using it for Day 2 of the Unit plan in order to provide students with some basic background info on the canal.

Erie Canal Museum

The Erie Canal Museum is located in Syracuse, New York. It could represent an excellent overnight fieldtrip possibility after completion of the Unit plan. The museum is housed in the National Register landmark 1850 Weighlock Building, the only surviving canal boat weighing station. It includes a full-size canal boat that visitors board to experience canal life. I called the museum and guided tours are available for students.

*Harness, C. (1995). *The amazing impossible erie canal*. New York: Aladdin Paperbacks.

This picture book provides an excellent comprehensive overview of the Erie Canal. I am using it primarily for the Day 1 diagram of how a lock works but it could definitely be used for other lesson planning purposes.

*Ignall, J. (2010). *An erie situation*.

I wrote this play to use for Day 3 of the Unit plan. It is intended to give students some basic background on George Washington's attempt to build a canal using the Potomac River. However, the main objective of the play is to get students to understand the political challenges of building the Erie Canal and ultimately the tremendous change that it brought to New York City.

Levstik, S. & Barton K. (2005). *Doing history*. New York: Lawrence Erlbaum Associates.

This is the textbook that we used in class this semester. The book inspired my lesson planning as I strived to have students identify history as a "living" subject by connecting it to our present day lives.

Murphy, J. (2006). *Desperate journey*. New York: Scholastic Press.

This is an historical fiction book that describes daily life on the Erie Canal including what the conditions were like for those who built it. While it may be a little advanced for 4th Grade readers, it should be fine for the Read Aloud on Day 4.

New York State web site: <http://www.canals.ny.gov/cculture/history>.

The New York State web site includes some excellent information on state canals. This is where I found information on the changes that the Erie Canal had on shipping rates and tonnages that went through port of New York City.

*New York State web site: <http://www.p12.nysed.gov/ciai/socst/ssrg.html>.

This is where I got my information for the New York Social Studies Standards as well as the Resource Guide with Core Curriculum. This allowed me to identify where the Erie Canal fit within the Standards and Core Curriculum for 4th Grade Social Studies.

*Talbot, H. (2009). *River of dreams*. New York: G.P. Putnam's Sons.

This is another picture book that provides an excellent comprehensive overview of the Erie Canal. While its primary focus is on the Hudson River, it is perfect for my Day 5 Read Aloud because it does a good job of describing the changes that occurred in the U.S. as a result of building the canal (railroad boom, Gilded Age, etc..).



Completed almost 200 years ago, the Erie Canal had a profound impact on the economic and geographic makeup of the United States. However it wasn't always smooth sailing for this 363-mile wonder. THIS is the story behind the Erie Canal...

An Erie Situation

by Jeff Ignall

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Narrator 1
George Washington
Martha Washington
Narrator 2
Thomas Jefferson
Joshua Forman
DeWitt Clinton
Objector 1
Objector 2
Objector 3
N.Y. State Assemblyman



SCENE ONE

Narrator 1: *Virginia, 1785. While the United States had just won the Revolutionary War against the British, there was no rest for the weary. Visionaries such as George Washington were already looking forward the future of the country.*

G. Washington: Martha, I am concerned about what may lie ahead for our country as we attempt to expand westward.

M. Washington: What do you mean, George?

G. Washington: I have just completed a voyage near the Appalachian Mountains.

They are a formidable boundary. We must figure out a way to pass these mountains if our country is going to expand westward effectively.

M. Washington: That sounds complicated, George. Do you have a plan?

G. Washington: Yes, Martha. I am going to use the Potomac River as a gateway to the west. I want to build a canal system that will allow boats to travel to the western side of the Appalachian Mountains using the Potomac River. I have raised \$200,000 from private investors and the states of Virginia and Maryland.

Narrator 2: *In 1788, Washington was called away from his project to become the first president of the United States. The Potomac River would prove to be a difficult opponent. While a canal system was opened in 1803 (four years after Washington's death) it never gained traction because of engineering issues. Ultimately it went bankrupt in 1828.*



Lock 1 of the Potomac Canal

SCENE TWO

Narrator 1: *Meanwhile up in New York, many influential people were starting to get behind the idea of building a canal to connect Lake Erie with the Hudson River in order to trade furs and other goods with the Midwest. We join a meeting between Joshua Forman, a banker and entrepreneur from*

upstate New York, and President Thomas Jefferson in Washington, D.C., 1809.

Forman: President Jefferson, I am here to discuss the report that was sent to you by New York State for the construction of a canal from Lake Erie to the Hudson River.

Jefferson (*thinks to himself*): *"these Yorkers are CRAZY".*

Jefferson: I'm sorry Mr. Forman, but the U.S. Government just can't get behind a project like this. You have no doubt seen that a canal of only a few miles projected by George Washington is struggling at the moment. Isn't it a little short of madness to think of building a canal of 350 miles through the wilderness?

Forman: But Mr. President, the building of this canal is achievable beyond our most optimistic expectations. Plus it would be of great benefit to the country. Didn't you recently say that the government's surplus would be spent on infrastructure?

Jefferson: Yes, I did. But things have changed. The trade embargos I enacted on France and Britain are having a negative impact on our economy and it could lead to a war. I'm sorry but the state of New York is going to have to attempt this on its own; although I do encourage caution.

Forman: Mr. President, the great state of New York will NEVER rest until the canal is accomplished.

SCENE THREE

Narrator 2: *President Jefferson delivered a crushing blow to the "Yorkers". However, as Joshua Forman noted, they would not give up. DeWitt Clinton, then Mayor of New York City adopted the canal project as his own and used its popularity to become the Governor of New York in 1817. However, the building of the canal received a lot of political opposition. We rejoin the story in 1817 as Clinton tries to convince the New York State Legislature for canal funding...*

Clinton: My fellow New Yorkers, this canal will give the state of New York a huge competitive advantage and enable New York City to develop as an international trade center. The port of New York will be become the Atlantic home port for all of the Midwest. We will steal business away from other ports such as Philadelphia, Pennsylvania, and Baltimore, Maryland. And before long, the whole island of Manhattan, filled with people and a dense population, will be one vast city.

Objector 1: CLINTON YOU FEDERAL SNITCH, WHY WASTE OUR TAXES TO BUILD A DITCH?

Objector 2: YOU ARE ONLY BUILDING THIS DITCH SO THAT YOU CAN BECOME GOVERNOR. IT WILL NOT WORK AND YOU WILL LOSE OF ALL OUR MONEY!

Objector 3: CLINTON'S DITCH WILL BE HIS GRAVE!



DeWitt Clinton

N.Y. State Assemblyman: ORDER! ORDER! The state of New York hereby grants the sum of \$7 million to the Canal Commission in order to build a gateway to the west. Our state will be the pathway to the great United States empire that lies ahead.

Narrator 1: *The construction of the Erie Canal began in 1817. The project had its rough patches but the final cost was remarkably close to the \$7 million estimate. This is particularly incredible considering how significant an engineering feat it was at the time. The canal was built over eight years, mainly through the grit of Irish immigrants who used shovels to dig the 363 mile trench*

that was 40 feet wide and 4 feet deep. We join the opening ceremony in 1825:

Clinton: I have traveled here to Albany from Buffalo in six days by boat on a voyage that used to take over six weeks by horse and coach. This Erie Canal is an incredible testament to the vision and perseverance of the residents of New York State. I stand before you with a keg of water filled from Lake Erie. By pouring this water into the Hudson River, I am wedding the waters of Lake Erie and the Hudson River. The Erie Canal is now open for business!



Wedding of the Waters

AFTERWARD

Narrator 2: *The impact of the Erie Canal was immediate and dramatic as settlers poured out west. The explosion of trade predicted by Governor Clinton began, spurred by freight rates from Buffalo to New York of \$10 per ton by canal, compared with \$100 per ton by road. In 1829, there were 3,640 bushels of wheat transported down the canal from Buffalo. By 1837, this figure had increased to*

500,000 bushels; four years later it reached one million. In nine years, canal tolls more than recouped the entire cost of construction. Within 15 years of the canal's opening, New York was the busiest port in America, moving tonnages greater than Boston, Baltimore and New Orleans combined.

YOUR TURN

1. Why do you think New York is known as the "Empire State"?
2. Can you think of any political controversies that are happening today?
3. Can you think of a circumstance when you persevered even though no one else believed you could do it?

BIBLIOGRAPHY/SOURCES

Bernsetein, P. 2005. *Wedding of the Waters*. New York. W.W. Norton & Company, Inc.

<http://www.canals.ny.gov/culture/history>

THE ERIE CANAL

