

## What is a Canal?

In this inquiry-based introductory lesson, students will compare and classify bodies of water in order to determine what a canal is and what a canal is not. This lesson allows students to build upon background knowledge already acquired regarding geography, decisions people make, and technological advances. As a group, the class and teacher will use the See Think Wonder thinking routine to analyze an image of a familiar body of water. Students will then break off into small groups or pairs or work independently to analyze multiple images of canals and other bodies of water. The canal images will include multiple views of the Erie Canal. Each time the teacher and class address an image, they will post it in a T-Chart labeled “Canals, NOT Canals” for future reference.

**Lesson Duration:** 55 minutes

**Enduring Understandings:** Bodies of water have similarities and can be classified. A canal is a type of body of water.

**Concepts:** geography, technology, classification

**New York State Social Studies Standards Addressed:**

4.1a Physical and thematic maps can be used to explore New York State’s diverse geography.

4.6b In order to connect the Great Lakes with the Atlantic Ocean, the Erie Canal was built. Existing towns expanded and new towns grew along the canal. New York City became the busiest port in the country.

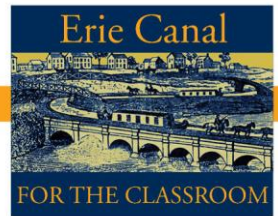
**New York State Social Studies Practices Addressed:**

### ***A. Gathering, Interpreting, and Using Evidence***

1. Develop questions about New York State and its history, geography, economics, and government.
2. Recognize, use, and analyze different forms of evidence used to make meaning in social studies (including sources such as art and photographs, artifacts, oral histories, maps, and graphs).

### ***D. Geographic Reasoning***

1. Use location terms and geographic representations (maps and models) to describe where places are in relation to each other, to describe connections between places, and to evaluate the benefits of particular places for purposeful activities.
2. Distinguish human activities and human-made features from “environments” (natural events or physical features—land, air, and water—that are not directly made by humans).



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## Teacher Questions:

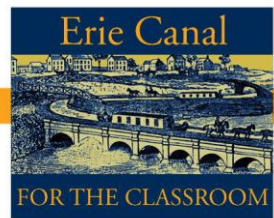
1. What do you See? Think? Wonder?
2. What types of bodies of water can you identify? How do you know?
3. Which images show canals? How do you know?
4. Based on our T-Chart, "Canals, NOT Canals," what definition would you give to a canal?

## Materials List:

1. Image of a familiar body of water (suggestion: Lake Ontario, an ocean)
2. See Think Wonder worksheet (provided)
3. Images depicting water (provided). Teacher may include ANY image with water, including students' own photographs, maps they are familiar with, or teacher's personal collection. These images should be copies of original documents. Students will be taping images into a T-Chart shared class document for visual reference.
4. Sticky notepads for each group/individual
5. Writing utensils
6. Chart paper or board that can be left up for a few weeks with a T-Chart labeled "Canal/NOT Canal." Leave room above this heading for a collective class definition.
7. Masking or painter's tape (for easy removal of images)

## Image List:

1. Page 7: lake. J. B. Beers & Co, *Map of Monroe County, New York* [map], 1887. <https://catalogplus.libraryweb.org/?section=resource&resourceid=1116706147&currentIndex=0&view=fullDetailsDetailsTab>. Courtesy of the Rochester Public Library Local History & Genealogy Division.
2. Page 8: lake. *Camping out close to the shores of Lake Ontario, Rochester, NY* [postcard], n.d. <https://catalogplus.libraryweb.org/?section=resource&resourceid=1116014384&currentIndex=0&view=fullDetailsDetailsTab>. Courtesy of the Rochester Public Library Local History & Genealogy Division.
3. Page 9: river. *The Genesee River Gorge and Driving Park Avenue Bridge, Rochester, NY* [postcard], n.d. <https://catalogplus.libraryweb.org/?section=resource&resourceid=1115979789&currentIndex=0&view=fullDetailsDetailsTab>. Courtesy of the Rochester Public Library Local History & Genealogy Division.
4. Page 10: river. Ira Srole, *Lower Falls from Driving Park Avenue Bridge* [photograph], 2009. <https://catalogplus.libraryweb.org/?section=resource&resourceid=1117021937&currentIndex=3&view=fullDetailsDetailsTab>. Courtesy of the City of Rochester.
5. Page 11: river and lake. United States War Department Corps of Engineers, *Chart of Charlotte Harbor, New York* [map], 1909. <https://catalogplus.libraryweb.org/?section=>



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Courtesy of the Rochester Public Library Local History & Genealogy Division.

6. Page 12: reservoir. *Rush Reservoir, Rush, NY* [photograph], 1987-1993. <https://catalogplus.libraryweb.org/?section=resource&resourceid=1116004779&currentIndex=4&view=fullDetailsDetailsTab>. Courtesy of the City of Rochester.
7. Page 13: reservoir. *Aerial photograph, Highland Park, Rochester, NY* [photograph], 1939-1941. <https://catalogplus.libraryweb.org/?section=resource&resourceid=1116929958&currentIndex=0&view=fullDetailsDetailsTab>. Courtesy of the Rochester Public Library Local History & Genealogy Division.
8. Page 14: canal. *Erie Canal, Newark, NY* [postcard], n.d. <https://catalogplus.libraryweb.org/?section=resource&resourceid=1115963470&currentIndex=0&view=fullDetailsDetailsTab>. Courtesy of the Rochester Public Library Local History & Genealogy Division.
9. Page 15: canal. *Canal Boats going over Aqueduct, Rochester, NY* [postcard], n.d. <https://catalogplus.libraryweb.org/?section=resource&resourceid=1115963370&currentIndex=0&view=fullDetailsDetailsTab>. Courtesy of the Rochester Public Library Local History & Genealogy Division.
10. Page 16: canal. *Erie Canal, Lockport, NY* [postcard], n.d. <https://catalogplus.libraryweb.org/?section=resource&resourceid=1115963470&currentIndex=0&view=fullDetailsDetailsTab>. Courtesy of the Rochester Public Library Local History & Genealogy Division.
11. Page 17: canal. *Erie Canal* [postcard], n.d. <https://catalogplus.libraryweb.org/?section=resource&resourceid=1115963470&currentIndex=0&view=fullDetailsDetailsTab>. Courtesy of the Rochester Public Library Local History & Genealogy Division.
12. Page 18: canal. *First Erie Canal Aqueduct, Rochester, NY, in 1820s* [illustration], ca. 1823. <https://catalogplus.libraryweb.org/?section=resource&resourceid=1115959074&currentIndex=0&view=fullDetailsDetailsTab>. Courtesy of the City of Rochester.
13. Page 19: canal. *Erie Canal packet boat around 1830* [watercolor], n.d. <https://catalogplus.libraryweb.org/?section=resource&resourceid=1115959135&currentIndex=0&view=fullDetailsDetailsTab>. Courtesy of the City of Rochester.
14. Page 20: canal. *Erie Canal view, Rochester, NY, in 1839* [painting], 1839. <https://catalogplus.libraryweb.org/?section=resource&resourceid=1115971612&currentIndex=0&view=fullDetailsDetailsTab>. Courtesy of the City of Rochester.
15. Page 21: canal and river. J. M. Lathrop & Co., *Plat book of the City of Rochester, New York, Plate 1* [map], 1900. <https://catalogplus.libraryweb.org/?section=resource&resourceid=1116153824&currentIndex=0&view=fullDetailsDetailsTab>. Courtesy of the Rochester Public Library Local History & Genealogy Division.

For additional images of and relating to the Erie Canal, see the Erie Canal topic section of the Rochester Public Library's *Rochester Voices* website: <http://www.rochestervoices.org/topics/erie-canal/>.

# What is a Canal?

## Procedure:

Teacher Questions	Procedure	Materials
1. What do you See? Think? Wonder?	<b>10 minutes:</b> Complete a “See Think Wonder” Visible Thinking Routine with the class using an image of a familiar body of water (suggestion: Lake Ontario, an ocean).	<ul style="list-style-type: none"> <li>Image of a familiar body of water (suggestion: Lake Ontario, an ocean)</li> <li>See Think Wonder worksheet (provided)</li> </ul>
1. What do you See? Think? Wonder? 2. What types of bodies of water can you identify? How do you know? 3. Which images show canals? How do you know?	<p><b>20 minutes:</b> Show students that you have a pile of images in your hand and begin placing the images around the room. Alternatively, you may pair students up and assign an image to each pairing. Ask students if they notice anything that the images have in common. If they don’t notice the images all depict water while you are placing the images around the room, explicitly share the images with the students, holding each up for a moment until students notice they are of water.</p> <p>Tell the students that they will complete their own “See Think Wonder” routine with an image of their choosing. Note that the image will contain water. Explain that they are trying to decide what type of body of water their image depicts. They must record their answers on a sticky note that goes with the image. Students may work alone or with a partner. Walk around to support student learning as needed.</p> <p>TEACHER NOTE: To differentiate, you could give students a word bank from which to choose the type of body of water they find. Enrichment could be having some students find another example of a different type of body of water on their own.</p>	<ul style="list-style-type: none"> <li>Images depicting water (provided). Teacher may include ANY image with water, including students’ own photographs, maps they are familiar with, or teacher’s personal collection. These images should be copies of original documents. Students will be taping images into a T-Chart shared class document for visual reference.</li> <li>See Think Wonder worksheet (provided)</li> <li>Sticky notepads for each group/individual</li> <li>Writing utensils</li> </ul>

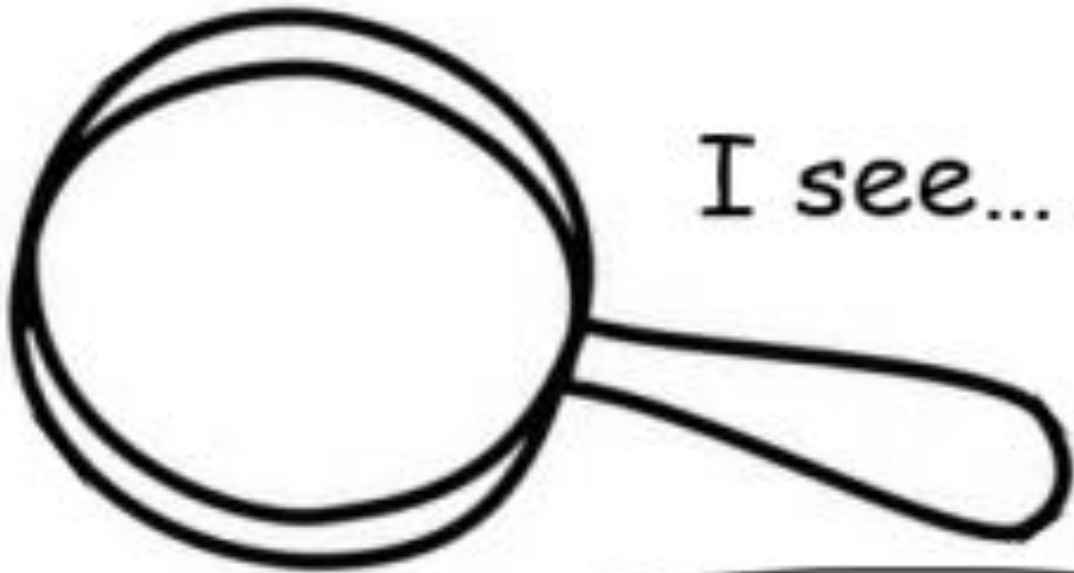
## What is a Canal?

<ol style="list-style-type: none"> <li>1. What do you See? Think? Wonder?</li> <li>2. What types of bodies of water can you identify? How do you know?</li> <li>3. Which images show canals? How do you know?</li> </ol>	<p><b>20 minutes:</b> Bring the students back together as a class. Have each student/pair share their image and how they identified it. Allow for discussion and have the class collectively determine where the image fits on the T-Chart labeled “Canal/Not Canal.” Tape images to the chart as you go.</p>	<ul style="list-style-type: none"> <li>• Chart paper or board that can be left up for a few weeks with a T-Chart labeled “Canal/NOT Canal.” *Leave room above this heading for a collective class definition (next step).</li> <li>• Masking or painter’s tape (for easy removal of images)</li> </ul>
<ol style="list-style-type: none"> <li>4. Based on our T-Chart, “Canals, NOT Canals,” what definition would you give to a canal?</li> </ol>	<p><b>5 minutes:</b> Pose the question: “Based on our T-Chart, “Canals, NOT Canals,” what definition would you give to a canal? You may add to the definition of others or challenge parts of their definition.” Allow students to share together, offering minimal interruptions until the class can collectively agree on a definition. Record their definition at the top of the T-Chart.</p> <p>TEACHER NOTE: You may want to label the “NOT canals” images with the appropriate type of body of water.</p>	<ul style="list-style-type: none"> <li>• The “Canals, NOT Canals” T-Chart that was just created</li> </ul>



# See Think Wonder Worksheet

Name(s) \_\_\_\_\_ Date \_\_\_\_\_



I see...

I think...



I wonder...









*Camping out close to the shores of Lake Ontario.*

**ROCHESTER, N.Y.**



The Genesee River Gorge and Driving Park Avenue Bridge, Rochester, N. Y.

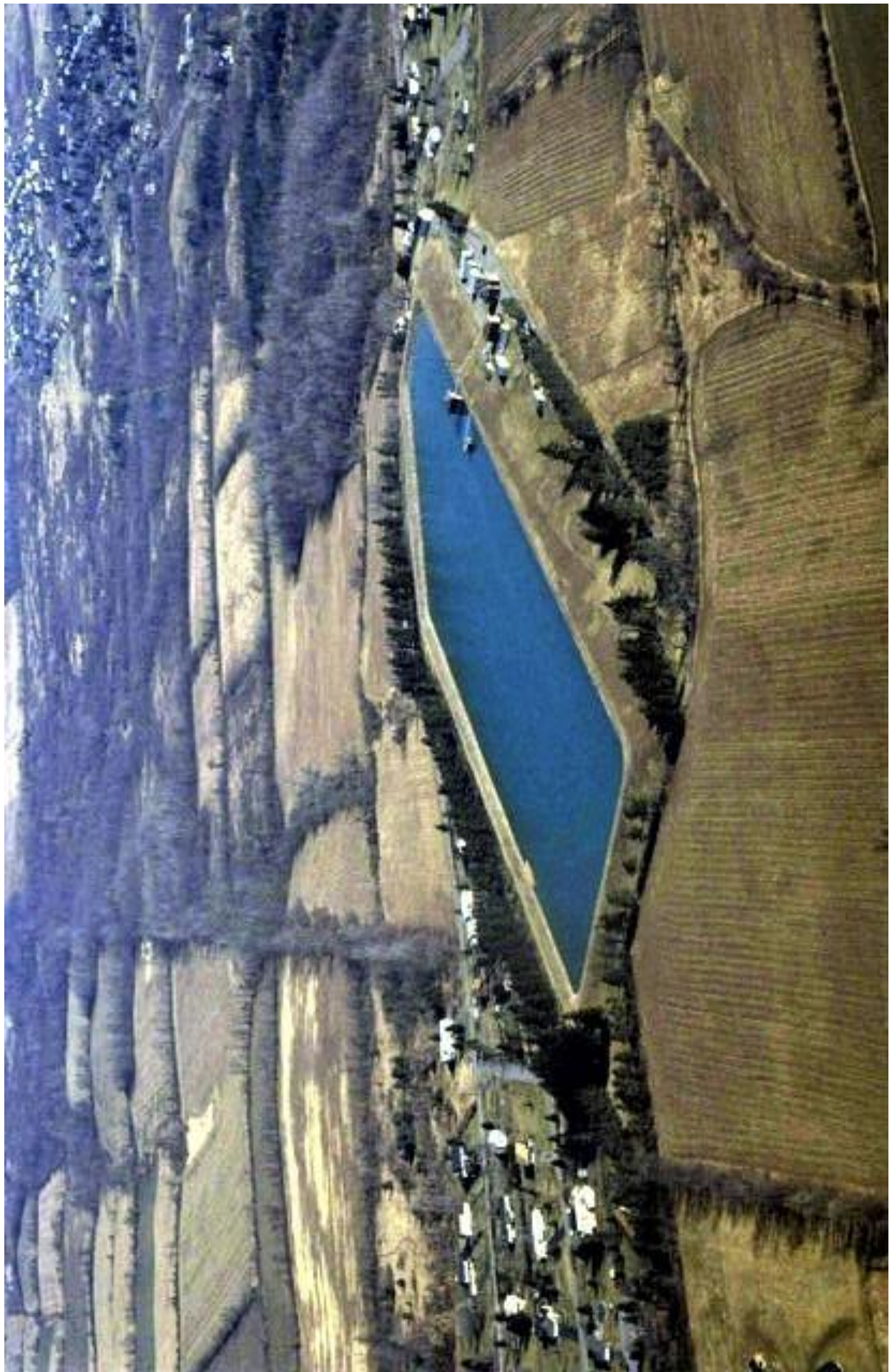










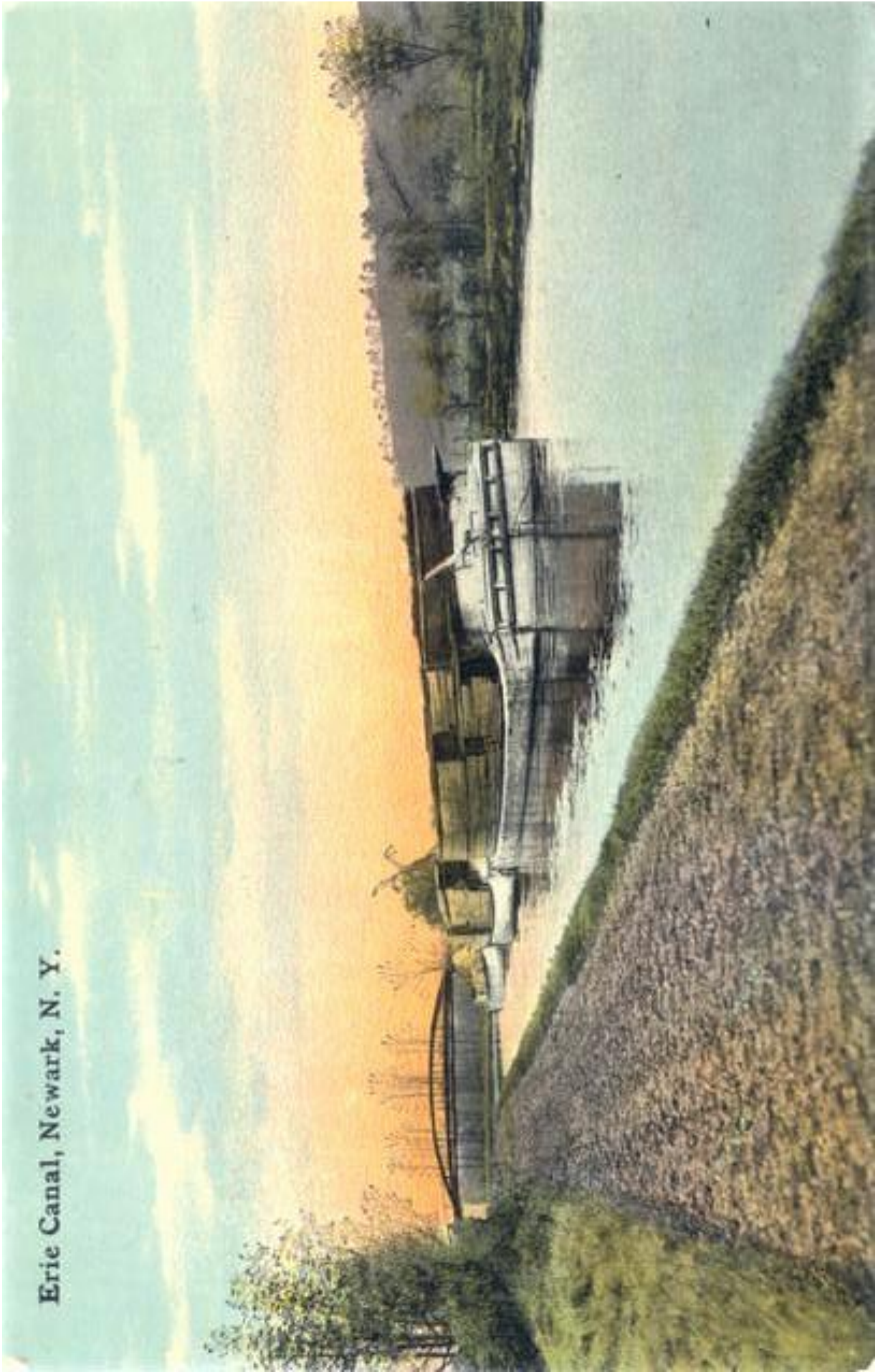




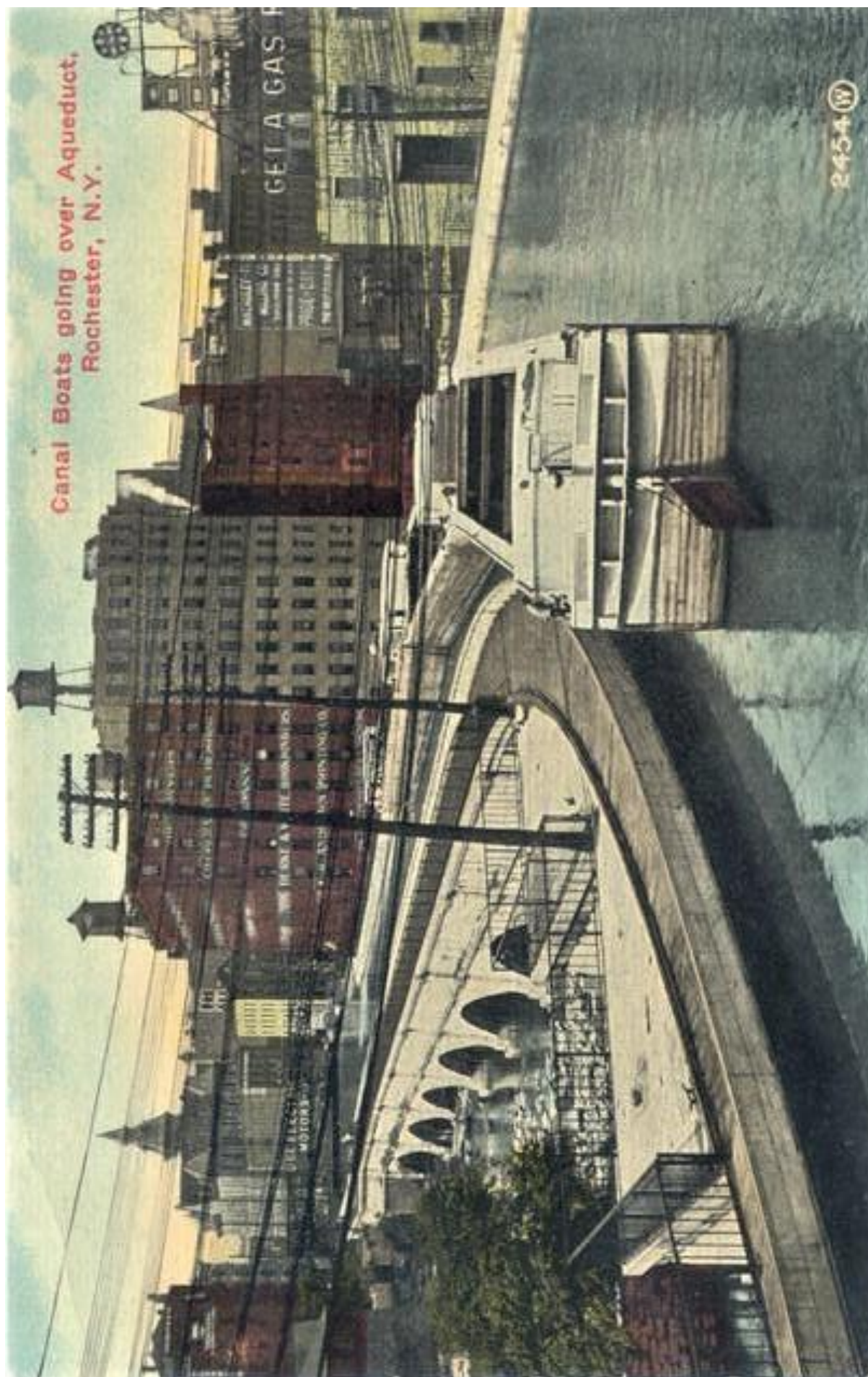




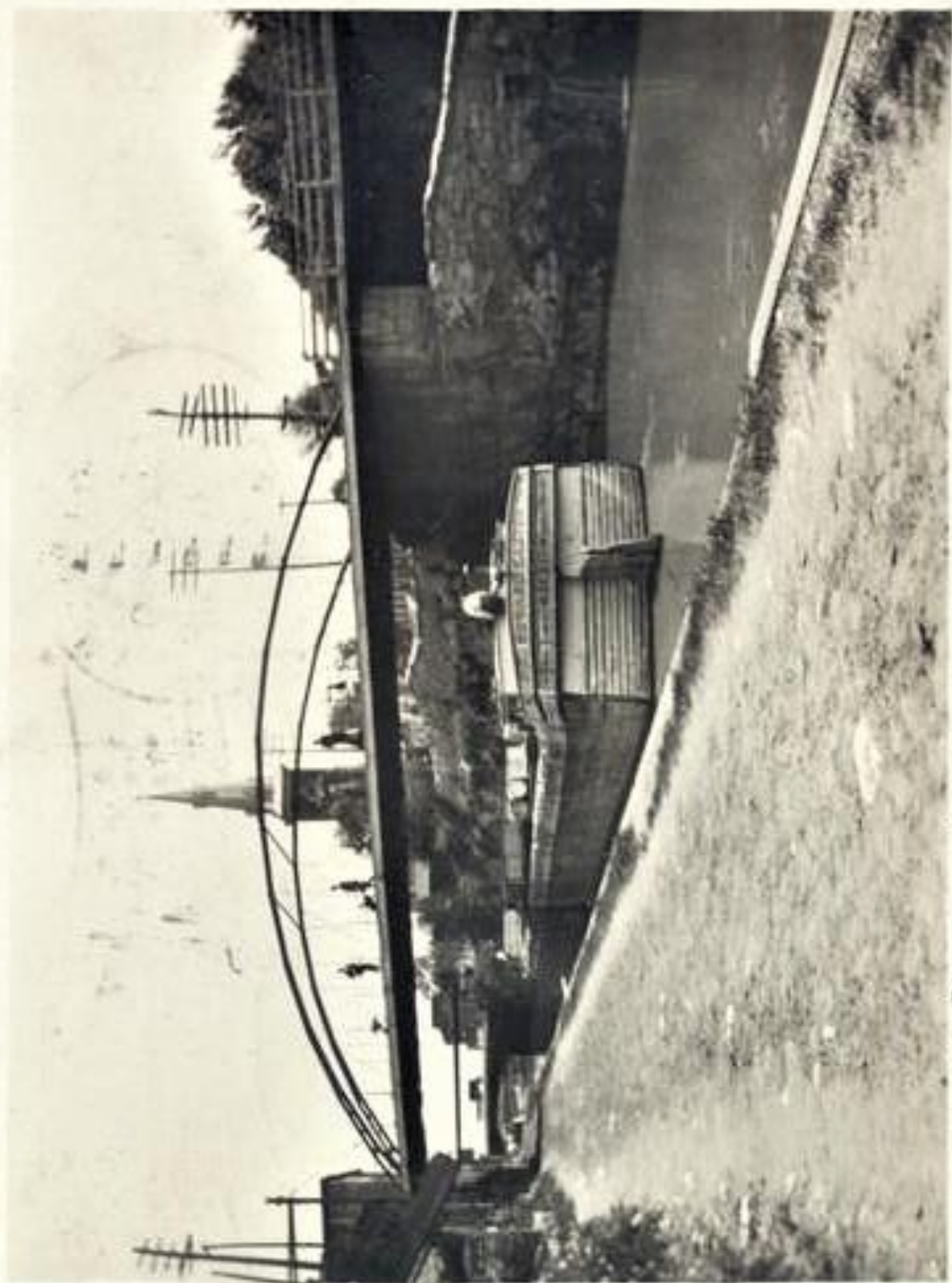
Erie Canal, Newark, N. Y.







2454 (W)



Erie Canal Lockport, N.Y.





Grice Canal





RARE VIEW OF THE FIRST AQUEDUCT CARRYING THE ERIE CANAL  
OVER THE GENESEE RIVER AT ROCHESTER, NEW YORK



PACKET BOAT ON THE ERIE CANAL.



