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## **Mill River: Past, Present, and Future of New Haven**

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### **Introduction**

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As a Social Studies Teacher at New Haven Academy, a social justice themed public magnet high school, currently serving just under 300 students from New Haven and surrounding towns, I presently teach Civics/Choosing to Participate, U.S. History, and two different Facing History and Ourselves courses. With this teaching load I cover all four grade levels, and often have the opportunity to work with the same students multiple times before they graduate. I will be teaching an elective for a semester during the 2023-'24 school year and have designed this unit for the course. This elective, "People and Place," typically has focused on the reciprocal relationship between a place, the culture of the people who developed or settled the area, the ensuing changes made by those people, and the impacts. This unit of study will allow a much deeper exploration of these ideas in New Haven than in years past as it is grounded in a series of local case studies and field experiences and is open to all students.

New Haven Academy's magnet theme focuses on social justice and civic engagement. Our motto is, "Think critically. Be responsible. Get Involved." Although we support all our students in their active participation in their learning and community, senior year contains the most concrete example of community involvement with the Social Action Project.

This unit provides an opportunity for students to practice some of the key skills embedded in the Social Action Project, while connecting with a contemporary environmental issue that has a lasting impact on the local community.

I decided to participate in the Yale New Haven Teachers Institute because I yearned to reconnect with the ideas and content that I love and drew me to education initially. Ever since I was a young boy exploring the woods near my home, I have been fascinated by the history of specific places. To this day my time out in the forests, parks, and waterways is often punctuated by questions; What happened before I was here? Why did it happen? What if things had been different?

The content of this unit provides a grounding in the historical context of the development of the neighborhoods adjacent to the school, while allowing students to physically explore the banks of the Mill River,

and associated ecosystems, where accessible. By combining classroom work with primary and secondary sources and work in the field, students will be better able to make connections and apply their learning to the world around them. In several of the lessons, work in the classroom is centered on an inquiry process during which students will generate and investigate questions, make predictions, and gather evidence all in service of applying their learning to our visits to sites along the Mill River.

The practice of getting out of the classroom and into the neighborhoods around us generally fosters high levels of engagement, deepens the learning experience, and provides opportunities for students to experience something they otherwise may not have been exposed to. Additionally, Place Based Learning (PBL) or Place Based Education (PBE) can more effectively develop students' sense of agency and connection to their surroundings in both the natural world and the urban built environment. According to *Children, Youth and Environments*, the place-based learning approach,

“emphasizes democratic, participatory and action-oriented teaching-learning that can help students develop their ability, motivation and desire to play an active role in finding democratic solutions to problems and issues connected to sustainable development.”<sup>1</sup>

This unit is not only a series of historical case studies and field trips, it also builds community and fosters skills necessary for social activism. After establishing a deep understanding of the historical and environmental context, students will turn their focus to be more forward looking. Students can apply the ideas of “be responsible” and “get involved” from our school motto. As we reflect on the choices made in the past regarding land along the Mill River and the impact on the natural world and local community, including the specific challenge posed by English Station and the contamination of Ball Island, students will find themselves in a position to propose and/or advocate for direct action in their own community.

## Rationale

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The information we can gather from a landscape itself can deepen our understanding of the past, strengthen our connection to the world around us, and help inform the decisions we make about the future. Considering this, working with young people, especially those who may have limited access or opportunity to engage with the natural world seems a logical place to start.

In focusing on specific locations in New Haven to anchor our study we are better able to examine what has changed over time, what has not, possible reasons for the changes we see, and the impacts of these changes.

In the courses I teach, students regularly work with primary sources in a variety of ways, but rarely, if ever, do they have the opportunity to connect a rich set of documents with the places they call home. In most cases the context they have access to consists of secondary sources, which are helpful, but still fall well short of learning based on experience. This framework will put students in charge of their own learning through the practice of using historical maps of New Haven to observe change over time and generate questions to investigate. The hope is that this course also opens students' eyes to the idea that the landscape itself is a rich source of information, from which we can learn much, if we know how to look.

In past experience, students regularly are challenged as to how to use maps to further inquiry, support claims, and generally make meaning of them. Because of this, map reading is not only a skill to be explicitly taught in this unit, it is an opportunity to transfer those developing skills to other areas of study and apply these skills to their lived experience.

To truly understand our current situation and the challenges we face we can look to historical examples and identify patterns of development, environmental impact, human reaction to those changes, as well as their legacies. As important, perhaps, is taking a critical eye to the way decisions about land use have been made. Who made the key decisions and why? We see that including communities in the decision-making process regarding land use and development bring greater attention to economic equity and environmental justice. Unfortunately, given the concentration of power and wealth, in addition to the often-divergent interests of industry, property owners, and the public at large, inclusive decision-making often does not occur in marginalized communities. Bringing this disparity to light for students, and supporting them in their engagement, can better help them develop into active critical thinkers and dynamic members of their own communities.

Understanding these development dynamics requires deeply exploring the physical and built environment to engage the natural and social history of a place. For us, in this unit, this means the southern terminus of the Mill River watershed. Of the three rivers draining into New Haven Harbor, the Mill is the smallest and the most industrialized, running from the Eli Whitney mill dam under the interstate highway, and along the highly developed border between parts of downtown New Haven and the neighborhood of Fair Haven

The City of New Haven was built on its relationship with water including the harbor, major rivers, and canal. Less visible waterways and wetlands, including two creeks that once ran near today's State and Oak Streets provided direct water access for early residents a mere city block from the green. Despite the fact that these "invisible" bodies of water are gone, their locations and the impact they have had on the growth and development of neighborhoods, industry and energy, transportation, waste disposal and recreation can be observed to this day. With the right set of tools and a careful eye, we can connect their locations to the contemporary city and the impact these unseen features have on the city and its people.

Studying the Mill River allows us to connect broad patterns in urban history and environmental history to the specifics of the city we call home. This will be done largely through the inquiry process focusing on the idea of change over time and the impact those changes have had. Students will "revisit" specific sites explored in the historical record through primary and secondary source use and document the changes they can observe using photography, writing, and sketching.

By ending with a contemporary environmental and social justice case study of Ball Island and English Station, we provide an opportunity for students to put to use what they have learned and actively engage community members on this topic of shared importance.

Integrating experiences in the field is central to this unit and provides access points beyond the traditional document-based approach which benefit all learners. As Robert Barratt has written in *Children, Youth and Environments*,

"exploratory and experiential learning activities in school grounds and local communities" contribute to "improved achievement, physical and mental health, social interaction and personal concept/esteem alongside enhancement of environmental responsibility, and resilience."<sup>2</sup>

## Content background

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Throughout human history rivers have been a key factor where and how civilizations emerged. Although rivers vary immensely, the resources and opportunities they provide are nearly universal: drinking water and irrigation, transportation of goods, people and ideas, a source of energy and food, the disposal of waste, and recreation. Of course, humans have also extensively modified rivers and their surrounding ecosystems in the process of taking advantage of these opportunities and resources. Change in one location can impact people and communities both up and downstream. We can explore these ideas across the globe, but doing it in our own neighborhood makes it real in a way that is difficult to replicate through the more abstract use of media.

The rivers of Connecticut have long shaped settlement patterns and have been central to the development and growth of our cities. They have also been home to contentious debates surrounding their use, access, preservation, and restoration as well as drivers of social change. According to historian William Devlin, mill dams harnessed Connecticut's rivers to power the state's early industrialization.

“In the era of rapid urbanization that followed, population grew in the industrial towns, cities, and factory villages that crowded against the banks of its large rivers and many of its smaller ones as well.”<sup>3</sup>

By 1900, more than half of the state's population lived in thirteen cities, each served by at least one important river.

The use of rivers shaped legal doctrine, with decisions regarding the building and maintenance of dams, and the regulation of industrial dumping as well as sewage disposal helping to establish environmental standards. According to Devlin,

“Connecticut's courts “have taken no uncertain stand on the question of river pollution. In no other state of the union has there been such unequivocal judicial disapproval of the practice of destroying water resources.”<sup>4</sup>

Despite this stance, the rivers of Connecticut and New Haven continued to be damaged by industrial waste and sewage until public pressure and increased attention from the State resulted in the Connecticut Clean Water Bill, in 1967.

The Mill River itself allows us to observe these human-made changes to the physical landscape, judge their impact, and theorize about how we may better manage the challenges of water, greenspace, and habitat restoration in New Haven. What we see on the relatively small level with this river fits into a pattern we see around the world in terms of the utilization, degradation, and limited restoration of essential waterways. The intensely local nature of this study lends itself to personal experience through site visits in conjunction with more academic coursework. It also connects to the lived experience of many of our students who inhabit the neighborhoods along the banks of the Mill.

## Physical and environmental context

The Mill River flows from North to South from Cheshire/Wallingford, through Hamden and New Haven and drains into New Haven harbor where it meets the Quinnipiac River. Moving south along the course of the river, the surrounding land become increasingly urban and industrial, with far more of the land covered by impermeable surfaces. Although the portion of the river that flows along the base of East Rock is preserved open space, much of the river has been altered by and for human use. The most notable of the man-made features of the river are the 160-year-old Eli Whitney Dam and associated Lake Whitney, which currently provides drinking water for the people of New Haven and surrounding towns and has since the inception of the New Haven Water Company in 1862, and the extensively industrialized waterfront between of the river's intersection with Interstate-91 and the Quinnipiac River.

The Whitney dam itself occupies a space long utilized due to its unique topography. Mill Rock, to the west of the river closely abuts Whitney peak to the east. These Basalt outcroppings created a narrow channel through which the river flowed, a logical place to build a dam to harness the power of the river. For a dam to provide any significant power, the designer needs to also consider vertical drop in addition to the volume of water flowing. This site offered both.

Soon after the arrival of John Davenport and Theophilus Eaton, and the establishment of the settlement of New Haven in the early 17<sup>th</sup> century, a dam was constructed at this location for the purpose of milling grain. Although this dam and associated mill were damaged by fire and rebuilt a number of times, we can say that this section of river has been exploited for industrial purposes for over 380 years. Since the late 19<sup>th</sup> century the site also has provided the city with a clean source of drinking water as wells became increasingly insufficient and contaminated as the population of the city increased. In an effort to reduce cases of water borne illnesses, such as cholera and typhoid, The New Haven Water Company was formed as a private venture to address the developing public health challenges.

We know, given the presence of the Quinnipiac people, the Mill River was also likely used as a source of food for thousands of years before the arrival of Europeans. The harbor, into which the Mill, Quinnipiac, and West Rivers drain, was a rich source of food, including oysters, enjoyed by Native people, colonists, and city dwellers until industrial pollution, harbor dredging, and sewage from the city decimated their numbers and rendered them unsafe to consume. Despite the level of pollution still seen around the river's southern terminus, some residents still fish its waters.

South of the Eli Whitney Dam, the Mill River is a tidal river. The brackish water of its estuary made it an important set of ecosystems for fish, shellfish, birds, insects, and mammals before widespread draining and filling of the associated wetlands.

Intact coastal wetlands also provide important ecosystem services. These can include; sequestration of carbon in their soils, filtering of water, and the ability to act as an essential buffer between the ocean and land during storms. By slowing down and absorbing a portion of storm surge and dissipating the energy of waves, coastal wetlands are an important protection for coastlines and coastal cities. In areas where coastal wetlands have been degraded, we see more significant damage in the wake of tropical storms and hurricanes.

Healthy coastal wetlands have an intimate relationship with the rivers that help form them. Sediment is carried downstream and deposited as the flow of the river slows, creating a meandering channel in many cases. Because coastlines are dynamic places, constantly shifting based on the direction and intensity of

waves and other factors, the consistent deposition of sediment is essential for the continued health and survival of this ecosystem.

When rivers are dammed or channeled, this process is slowed, if not halted entirely, depriving the fragile coastal ecosystem of vital nutrients and the replacement of eroded soil. On top of this, the waterfront is often the site of extensive, essential infrastructure, often based on industry and/or trade. Sewers may discharge runoff from rainfall along with everything else that water picks up on its journey. In many cases cities have not designed sewer systems capable of handling increasingly intense rain events, or have been unable to effectively maintain their systems. Combined sewer pipes that mix rainwater and sewage can lead to flooding and/or the release of untreated sewage into waterways. The changes wrought over the course of the growth and development of New Haven have nearly, if not completely eliminated these ecosystem services and habitat.

In many cases wetlands drained for agricultural use are often developed for other purposes afterwards. As part of a pattern we see on the national level, many of these abandoned, former industrial areas, or even dumps established on former wetlands have become the site of public schools. New Haven's Wilbur Cross Highschool is situated on the bank of the Mill River, a former tidal marsh, while John Martinez School further downstream occupies former wetlands filled for industrial use. Wetlands can be desirable locations for industry because of the water as a means to transport raw materials, provide cooling, and as a place to dispose of industrial waste.

In our progress through the teaching unit we follow the Mill River South, we also move forward in time. After exploring the Eli Whitney Armory and Dam site in person along with the surrounding East Rock Park, we will look at the industrialization of the waterfront at the confluence of the Mill and Quinnipiac Rivers

Industrialists selected these locations because of their proximity to water. Not only did this provide a way to bring finished products to market, it also allowed the flow of necessary raw materials. As steam engines, fired by coal boilers became the default, coal arrived in massive quantities by water and by railroads that served industries located near the rivers or the canal. Burning that coal had adverse impacts on the local environment and residents including the accumulation of heavy metals in soils, the release of sulfur dioxide, nitrogen oxides, and particulates. These pollutants contribute to increased rates of asthma, neurological disorders, and cancer in surrounding residential areas.

By the late 19<sup>th</sup> century the shores of the Mill River were dominated by industry. Much of the land that was used by developing industries was actually created by draining and filling salt marshes along the river's banks. Some of the major companies occupying the mouth of the Mill River were, New Haven Gas Light Company, Bigelow Boiler Company, National Pipe Bending Company, carriage makers, W.&E.T. Fitch Company and Holcomb Brothers, New Haven Saw Mill Company, and New Haven Pulp and Board. Although they provided jobs and contributed to the growth of the city, each of these facilities produced waste as well as consumer goods. Much of that waste was dumped directly into the river. This pollution, in conjunction with other industries created an environmental crisis, resulting in the elimination of the oyster as a viable food and economic force from the harbor as well as leaving us with the legacy of environmental toxins. Work to remediate these sites remains contentious and ongoing.

The creation of new land was also utilized during the development and expansion of the interstate highway system. New Haven was considered a national leader in "urban renewal" in which the integration of highways and city centers was central. Certainly, the city was fundamentally altered through large scale demolition,

relocation of families and businesses and rebuilding with mixed results.

In the late 1950's, community involvement in the planning of these urban renewal projects was minimal and the process of implementing a cold set of building projects through vibrant, diverse neighborhoods, with seeming complete disregard for the people living in these neighborhoods, was contentious across the country. The national fight over highway building is exemplified in New Haven with additional proposed roadways disrupting life for longtime residents who felt they were displaced by the concerns of economic development for city leaders and planners. The Route 34, or Oak Street, Connector and its proposed extension, serve as examples of the negative impacts of these policies and plans,

“Over 1,000 families stand to be displaced by the proposed extension of route 34 and by the still hypothetical inner circumferential loop road. Three entire residential neighborhoods and 45 small businesses would be destroyed at a cost of at least \$25 million. City officials say the dislocation is justified”<sup>5</sup>

Many city residents were strongly opposed to the plan and felt excluded. As the American Independent Movement newsletter complained in 1967, “Another attempt at urban removal. Once again, the city is planning by highways, not by people.”<sup>6</sup>

Fortunately, not all the highway proposals were implemented. As communities more effectively mobilized to protect neighborhoods from demolition or division and additional regulation and oversight on the federal level emerged in the mid 1960's, the pace of building slowed. Neighborhood residents in cities such as Baltimore, San Francisco, Chicago and New Haven saw varying degrees of success in stopping or changing planned sections of highway cutting through their neighborhoods. Again, the Mill River features prominently in this national trend, with the defeat of a proposed East Rock connector. This proposed project called for the channelization of a stretch of the Mill River along the base of East Rock and was adamantly opposed by local residents, media and politicians. According to one account,

“The New Haven Register led the charge that the state was trying to steamroll its wishes against those of the people the highway would harm” Critics like State Rep. Lawrence O'Brien argued that the connector would not relieve local traffic but instead would concentrate it around the proposed terminus on Whitney Avenue.<sup>7</sup>

By examining this stretch of the Mill River that travels under I-91 at exit 6 (Willow St/State St) and a map of the proposed route one can observe the relationship between waterways and current transportation infrastructure. Much as the Route 34 connector follows the path of a long since vanished waterway, the banks of the Mill provided what planners saw as an ideal opportunity to utilize “vacant” land.

Additionally, with careful observation students will visualize how this plan would have been executed. The sharp curves on the entrance and exit ramps link us to the southern portion of the connector, while Armory Street in Hamden anchor its northern terminus. Having already explored portions of this section of the river on foot, students will theorize what the possible impacts could have been if this proposed of roadway had been built.



## Environmental Case Study; Ball Island and the future of the Mill River

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New Haven Electric Light Company was founded in 1881 and was originally located in downtown New Haven on Temple Street, between Crown and George Streets. As the demand for electricity rapidly increased, the company's decision to expand and relocate in 1890 was driven by complaints of residents of the area. According to one history of New Haven's development,

“People living in the residential neighborhoods around the George Street plant complained (some threatened lawsuits) about the constant vibration of the engines and the steady fall of “rain” from steam condensation.”<sup>8</sup>

Also taken into consideration was increased demand for water and coal. The site they chose on Grand Avenue gave them far easier access to both. No longer did they need to transport coal from the harbor by horse drawn wagon with direct access to the water and adjacent to rail lines. Eventually their coal fired plant was replaced by an oil burning facility on the southern portion of Ball Island, an 8.9-acre man-made island almost entirely contained by a steel bulkhead, which sits in the middle of the Mill River and is bisected by Grand Avenue.

English Station, the wider Ball Island, and the banks of the Mill at its southern terminus highlight the impact of industry on the health of the local community and economy as well as focus our efforts to imagine a better future for the neighborhood. The impacts of burning coal on a large scale in a densely populated neighborhood on human health and the associated buildup of heavy metals in the surrounding soils, cannot be understated. The switch to heavy oil brought additional challenges. The site has also been left heavily contaminated with PCBs from over 100 years of operation. Few of the pollutants stay put in the soil, leaching into groundwater and running off into the Mill River, New Haven Harbor, and eventually Long Island Sound.

The current effort to clean up Ball Island and plan its future will conclude the unit. This final case study will be framed as an inquiry to understand the challenges posed by the site, identifying viable options, communicating with stakeholders, and proposing a partial or complete solution. Ideally, this discussion will consider aspects of the entire watershed ecology, the history of the river outlined above, and practices of restoration ecology as applied to this specific site as well as the needs of the community.

## Unit Objectives

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### Skills

Within the context of several mini-inquiries, students will develop and refine their map reading skills, practice asking questions, and work to make connections by identifying patterns in history, cause and effect relationships, and explaining the connections between past and present. To do this we will use a variety of maps of New Haven and the surrounding area to observe change over time. By identifying aspects of the landscape that did not change (East, West, and Mill Rock as well as the West, Mill and Quinnipiac Rivers) we



can better observe patterns followed in the growth of the city and modification of natural features. The goal is to recognize the way topography literally shapes cities.

Recognizing that many of our students rely on GPS and have not actively used physical maps as a means to navigate, let alone as a rich historical source, we will be start with simple maps with limited information. Fortunately, the earliest maps we have of New Haven, based on the grid of the original nine squares, are relatively simple and easy to use. We will use this grid, centered on the Green as a way to connect all the maps we use, including digital maps and satellite imagery. This also offers the benefit of being able to “layer” several maps over one another and observe changes over time.

A second major skill focuses on primary source analysis, utilizing both images and text. Students will identify place names, specific events, and decisions about land use in connection with the maps and documents that they are. Connecting our text-based sources and maps with the physical world also can complicate our understanding of both the documents and the places under study. Ultimately students will use primary sources as source material in their inquiries and, as we approach the last piece in the unit, in support of the specific action or actions they are proposing.

Lastly, and most ambitiously, students will practice the skill of reading the landscape with an eye towards observing patterns, and making connections between the sources we use in class and the places we visit in the field.

## **Content**

Students will be able to identify and describe the major landforms that shape New Haven and have largely determined the way in which the city has grown.

Students will be able to identify, describe and assess the changes made to the natural environment as New Haven grew. This includes both the specific narrow focus on the Mill River, and the larger area including changes to the harbor, coastline, and surrounding wetlands.

Students will be able to identify, describe and assess changes to the built environment of the city of New Haven, focusing on the industrialization of the waterfront.

## **Teaching strategies**

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The pedagogical underpinnings of this unit are based on the inquiry process and Place Based Learning (PBL) or Place Based Education (PBE). The inquiry process and PBL exemplify what most of us experience when we are out in the world on a daily basis, albeit in a more formalized structure. Although they are referenced as distinct strategies and practices, there is significant overlap between the two, with the skills embedded in the inquiry process deepening the experience of exploring a place and vice versa.

### **Guided Inquiry**

Through the process of guided inquiry students will explore specific locations and case studies answering the questions;

What has changed?

What might be the reasons for the changes we see?

What have been the impacts of those changes?

Although these general questions are provided, and give us a place to start for each lesson, students will regularly practice asking and refining questions of their own, and answering them whenever possible. As stated in *Guided Inquiry : Learning in the 21st Century*,

“inquiry learning emphasizes personally relevant questions that inspire students to learn more and create unique ways of sharing what they have learned. Guided Inquiry raises the bar even further to move students to deeper learning by incorporating the research process explicitly into their work.”<sup>9</sup>

Part of the research students will engage with is the documentation of their experiences on our field trips. Photographs, sketches, notes, sound recordings and videos generated in our time in the field will be used to supplement the materials provided in the classroom.

### **Place Based Learning/Education**

Although we are focusing narrowly on New Haven and the Mill River, we also need to recognize that what we see in the places we study are part of a much larger pattern. Immersing students in the experience of a place encourages them to connect to that place, and by extension recognize similar aspects in other spaces. The transfer of these ideas is powerful. Teton Science Schools identify the following benefits of PBL, which I find applicable to this unit. They are;

“Local to Global Context: Local learning serves as a model for understanding global challenges, opportunities and connections.

Learner-Centered: Learning is personally relevant to students and enables student agency.

Inquiry-Based: Learning is grounded in observing, asking relevant questions, making predictions, and collecting data to understand the economic, ecological, and socio-political world.

Design Thinking: Design thinking provides a systematic approach for students to make meaningful impact in communities through the curriculum.”<sup>10</sup>

Each lesson will focus on gathering background information for context and using that specific information to generate and refine a series of supporting questions to connect to our class inquiry. Questions generation will also take place during field visits and will be especially useful when paired with specific lenses through which to consider the site. These lenses will include; ecological, socioeconomic, energy, transportation, and recreation.

The final piece in this unit asks students to engage with a real problem in their community, learn about it through research and experience, and propose action steps or plans to address the issue. In this case student

will be provided with their essential question, “What should be done with the Mill River District?” This is essentially the application of the inquiry process through the lens of place-based learning in conjunction with encouraging student voice and agency.

## Example Lesson Plans

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### Lesson 1 Landscape of New Haven

#### Objectives

Students will be able to identify and describe the natural features that define New Haven.

Students will be able to identify and describe man-made landmarks that define New Haven.

#### Materials

1. Mill River Watershed Plan pages 8-11. Includes maps and reading for context
2. Topographical GIS map of New Haven
3. Google maps

#### Learning Activities

Students will complete a scavenger hunt using Google Maps or Google Earth as an initial strategy to familiarize themselves with the layout and natural and man-made features of the city. After they have successfully completed this exercise they will match features from the scavenger hunt to locations on the topographical map of New Haven focusing on the relationship between elevation and population distribution and location of industry and transportation infrastructure. Finally, students will read pages 8-11 from Mill River Watershed Plan, again using the maps included in the reading to match with what they see in the topographical map and Google Maps/Earth.

### Lesson 2

How has New Haven changed over time? Introduction to historical maps

#### Objectives

Students will be able to use a series of historical and contemporary maps to identify and describe the major changes over the growth and development of the city.

Students will be able to identify and describe the specific changes we see in connection with the Mill River.

#### Materials

1. Map of New Haven 1641(1881 map)
2. A plan of the town of New Haven: with all the buildings in 1748
3. Map of New Haven 1775
4. Map of New Haven 1867

5. City of New Haven 1879 (panoramic bird's eye map)
6. Map of New Haven 1882
7. Map of New Haven 1889
8. Map of New Haven 1889
9. Map of New Haven 1943-47
10. Map of New Haven 1954-59

### **Learning Activities**

Students will view the series of historical maps of New Haven using the boundaries of water as an initial guide to major changes in the city. Working in groups students will do their best to arrange the maps in chronological order, as not all maps have a date clearly indicated. As they do this, they will mark specific locations on each map, allowing them to compare changes more effectively. These locations will overlap with the scavenger hunt in the previous lesson. Students will also record any and all questions they have. We will use this collaborative list of questions to check in with over the course of the unit to see which questions we can answer and which may require more research.

The intent in these activities is to introduce students to the way the city grew in its relationship to water and to practice question generation as one of the key aspects of the inquiry process. Guiding questions for their comparison of consecutive maps are; What specific changes do we see? Where can we identify residential areas? Where can we identify industrial areas? Why might this pattern of development exist in New Haven? How might these changes have shaped the lives of city residents at the time? Students should be able to identify changes to the coastline of the harbor and river banks in their work, as well as make the connections between the waterfront, industry and transportation.

### **Lesson 3**

Mill River as source of energy at the Eli Whitney Dam and Armory

#### **Objectives**

Students will be able to identify and describe the natural features that determined the placement of the Eli Whitney Dam.

Students will explore the impact the building of the dam and resulting industry had on the river itself and the connection to the development of the community of Whitneyville.

Students will compare what they have observed in the historical record with the present reality of the site.

#### **Materials**

1. The Whitney Armory Helps Progress in Hamden - Connecticut History (Secondary Source)
2. Image of "Hamden Whitney Fire-Arms" engraving 1862 (primary source)
3. Image of "Whitney Arms" engraving 1880 (primary source)
4. Hints for the layout of East Rock Park 1882 (primary source)
5. Mill River Dam photograph circa 1890 (primary source)
6. Library of Congress collection of Photographs of the Eli Whitney Dam and Armory complex
7. Topographic Map of New Haven
8. Map of New Haven 1954-59

## Learning Activities

Using the Topographic Map of New Haven and the Map of New Haven 1954-59 students will locate the Eli Whitney Dam and use compass points and natural features to describe its location. After successfully completing this task they will use information from the two maps to explain why the specific site may have been chosen for a dam and mill. What opportunities does this location offer? Students responses will be shared with the class and recorded for future reference.

While reading *The Whitney Armory Helps Progress in Hamden*, examining the images included, and exploring the primary sources listed above students will collaborate to build a list of questions and observations they have based on the material. Students will also work to theorize where each photograph was taken from and connect landmarks in the images with the landmarks on the maps.

Finally, students will use Google Earth or Google Maps to connect to the present, confirm or modify their theories of photograph locations, and add to the class list of questions and observations. This lesson is intended to prepare for a visit to the Eli Whitney Dam and Museum followed by a hike up Whitney Peak and to the Soldiers and Sailors monument.

## Lesson 4 East Rock Park

### Objectives

Students will examine the historical record as a basis for comparison with contemporary East Rock.

Students will consider the purpose of East Rock and green space more broadly in the context of New Haven.

### Materials

1. New Haven from East Rock 1915 painting
2. Hints for the layout of East Rock Park 1882
3. East Rock Park with Soldiers' Monument and the Mill River, New Haven photograph circa 1880's
4. Mill River Watershed based plan
5. Mullen, Arthur. "New Haven's Great Park." Roger Sherman house, September 5, 2019.
6. org. "Whitneyville from East Rock, Hamden and New Haven | Cths," 2020. Photograph
7. Current map of East Rock Park

## Learning Activities

Students will work to match images with maps to determine how the park and surrounding area has changed over time. What does the changing use of the park say about the society and culture of different moments in New Haven history? How was the park created through the collaborative efforts of city elites? Given a modern map, students will work to determine how the banks and course of the Mill River have been altered for the development of additional housing, Wilbur Cross Highschool, highways, industry, and other uses. This lesson is to be followed by a visit to East Rock park and a hike along the Mill River.

## Lesson 5

Preservation of greenspace and highways

## Objectives

Students will explore plans for highway construction in New Haven, the reaction and attitudes of residents and officials of the time, and compare areas where highways were built and where they were prevented.

Students will make explicit connections between the ideas and materials in the East Rock lesson with the proposed layout of highways in New Haven, and their present configuration.

## Materials

1. "Richard Lee's Urban Renewal in New Haven - Connecticut History | a CTHumanities Project," July 28, 2020.
2. Yale Daily News. "Urban Renewal in New Haven," February 4, 2018.
3. Wood, John. "Highways to Gird Yale." *Yale Daily News*, May 2, 1967.
4. Wood, John. "More 'Urban Removal?'" *Yale Daily News*, May 4, 1967.
5. kurumi.com. "The East Rock Connector." Accessed May 1, 2023.

## Learning Activities

Students will use the following questions to guide their exploration and discussion based on the document collection listed above along with notes, sketches, and photographs taken during walking field trips. How did the building of highways impact the neighborhoods of New Haven? How do the highways continue to shape neighborhoods? What is the legacy of these changes? Given past exploration of the Mill River and East Rock park, how might the East Rock Connector have changed the river and the park?

## Lesson 6

Industrial development and environmental justice

### Objectives

Students will explore the history of the Ball Island and English Station along with efforts to remediate and restore the site.

Students will assess existing proposals for addressing the challenges of Ball Island and the wider Mill River District and argue in support of the plan they feel is best.

### Materials

1. "'Welcome to a New Haven Urban Oasis!': The Battle over a Fair Haven Power Plant's Future." Yale Daily News
2. Brownfields in New Haven; A look into the Past, Present, and Future of Industrial Pollution
3. Mill River District Planning Study
4. English Station Remediation
5. "Could Housing Be Built at New Haven's Former English Station Power Plant Site? That Depends." New Haven Register
6. New Haven Board of Alders Homepage

## Learning Activities

### Inquiry project

Given the essential question, “What should be done with Ball Island and the Mill River District?” Student will work together to develop and refine a series of supporting questions, explore current reporting on the issues involved, and examine proposals for redevelopment. As they move through the inquiry process they will record information, gather evidence, and contact community activists and Alder people in order to decide as to what they believe is the most beneficial course of action. Groups will then present their findings to the class and final products will be displayed for the general audience of the student body.

### Student Reading List

Note: Several of the sources listed below are rather long. In these cases, specific sections will be assigned for class, with further reading available as an extension.

Wessels, Tom, Brian D Cohen, and Ann H Zwinger. *Reading the Forested Landscape : A Natural History of New England*. New York The Countryman Press, 1999. Chapter 1

Besche, John, Olivia Tucker 12:21 am, Feb 28, and 2020. “Welcome to a New Haven Urban Oasis!’ : The Battle over a Fair Haven Power Plant’s Future.” Yale Daily News, February 28, 2020.

<https://yaledailynews.com/blog/2020/02/28/welcome-to-a-new-haven-urban-oasis-the-battle-over-a-fair-haven-power-plants-future/>.

“By the Numbers: 78,000 People, 7 Towns, 38 Square Miles, 7 Tributaries,” n.d. Accessed April 25, 2023.

Devlin, William E. “Rivers of Outrage: The Forgotten Fights over Stream Pollution in Late Nineteenth-Century Connecticut, 1880-1925.” *Connecticut History Review* 59, no. 1 (April 1, 2020): 3-39.

<https://doi.org/10.5406/connhistrevi.59.1.0003>.

“Mill River Watershed Based Plan,” 2018.

New Haven (Conn.). East Rock Park Commission. “Hints for the Layout of East Rock Park.” May 1882. A Report to the Commissioners on Lay-out of East Rock Park / by Donald G. Mitchell, LL.D.

Wood, John. “The Scene (First of a Three-Part Series on Proposed Highway Construction in New Haven, the People Who Are Fighting It. And what it Will Mean for Yale),” n.d. Accessed June 26, 2023.

[www.kurumi.com](http://www.kurumi.com). “The East Rock Connector.” Accessed May 1, 2023.

Connecticut History | a CTHumanities Project - Stories about the people, traditions, innovations, and events that make up Connecticut’s rich history. “The Whitney Armory Helps Progress in Hamden - Connecticut History | a CTHumanities Project,” October 4, 2021.

Mullen, Arthur. “New Haven’s Great Park.” Roger Sherman house, September 5, 2019.

Maynard, Preston, Marjorie B Noyes, and New Haven Preservation Trust. *Carriages and Clocks, Corsets and Locks : The Rise and Fall of an Industrial City--New Haven, Connecticut*. Hanover, N.H.: University Press Of New England, 2004.



Rubin, Elihu. "A People's Guide to Infrastructure in New Haven." [campuspress.yale.edu](https://campuspress.yale.edu). Accessed July 5, 2023.

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Bailey, O. H, and J. C Hazen. *The city of New Haven*, Conn. Boston, 1879. Map. <https://www.loc.gov/item/75693153/>. 1879 panoramic map of New Haven. Includes great detail down to the level of individual buildings. Another resource to examine change over time, especially in consideration of the waterfront and industrialization.

Besche, John, Olivia Tucker 12:21 am, Feb 28, and 2020. "'Welcome to a New Haven Urban Oasis!' : The Battle over a Fair Haven Power Plant's Future." *Yale Daily News*, February 28, 2020. Provides background, progress, and proposals for Ball Island and English Station remediation/redevelopment. Also highlights the successes and challenges of community input on this project.

Boucher, Robert J. "Historical Geography of Mill River A Study of Mill River in New Haven County Showing its Geological History, Topography, and Utilization as a Source of Water Power for Early Industry and its Subsequent Decline." Order No. EP27634, Southern Connecticut State University, 1966. <https://www.proquest.com/dissertations-theses/historical-geography-mill-river-study-new-haven/docview/302260439/se-2>. Maps, historical accounts, watershed analysis. Background reading.

Bradley, George R. *Mill River Dam*. 1890. Modern print from original glass negative c. 1890. New Haven Museum.

"By the Numbers: 78,000 People, 7 Towns, 38 Square Miles, 7 Tributaries," n.d. Accessed April 25, 2023. One-page data sheet about the Mill River Watershed. Useful for students.

Chs.org. "Whitneyville from East Rock, Hamden and New Haven | Cths," 2020.

[collections.library.yale.edu](https://collections.library.yale.edu). "A Plan of New Haven and Harbour / by President Stiles of Yale College, Sept. 27th, 1775. - Yale University Library." Accessed July 1, 2023. <https://collections.library.yale.edu/catalog/15827429>.

[collections.library.yale.edu](https://collections.library.yale.edu). "Map of the City of New Haven / R. Whiteford. - Yale University Library," 1867. <https://collections.library.yale.edu/catalog/15675096>.

[collections.library.yale.edu](https://collections.library.yale.edu). "Rotival Plan - Yale University Library." Accessed July 1, 2023. <https://collections.library.yale.edu/catalog/16197931>.

Connecticut History | a CT Humanities Project - Stories about the people, traditions, innovations, and events that make up Connecticut's rich history. "Richard Lee's Urban Renewal in New Haven - Connecticut History | a CT Humanities Project," July 28, 2020. Secondary source to be used as reading for context for students. Overview or Lee and Urban Renewal in New Haven.

Connecticut History | a CT Humanities Project - Stories about the people, traditions, innovations, and events that make up Connecticut's rich history. "The Whitney Armory Helps Progress in Hamden - Connecticut History

| a CT Humanities Project," October 4, 2021.

<https://connecticuthistory.org/the-whitney-armory-helps-progress-in-hamden/>. Secondary source with brief overview of production of fire-arms at the Whitney Armory. For use as student reading.

Corrie R. Colvin. "Placed-Based Education Annotated Resource List." *Children, Youth and Environments*, vol. 21, no. 1, 2011, pp. 332-48. *JSTOR*, <http://www.jstor.org/stable/10.7721/chilyoutenvi.21.1.0332>. Accessed 30 May 2023. Useful for getting started on Place Based Learning.

Cronon, William. *Changes in the Land: Indians, Colonists, and the Ecology of New England*. 1983. Reprint, New York: Hill and Wang, 2003. Background reading for those interested in learning more about ecological changes wrought by colonists and later settlers of New England as well as their social and economic impacts. Portions of this may be accessible and useful for higher level students and/or those with expressed interest.

Cronon, William. "William Cronon - HI/GE/ES 469 Course Page." [www.williamcronon.net](http://www.williamcronon.net), December 11, 2018. Provides a huge set of resources from William Cronon's course, "The Making of The American Landscape." Includes student handouts, learning activities, and primary sources.

Dawidoff, Nicholas. *The Other Side of Prospect: A Story of Violence, Injustice, and the American City*. W. W. Norton & Company, 2022.

Devlin, William E. "Rivers of Outrage: The Forgotten Fights over Stream Pollution in Late Nineteenth-Century Connecticut, 1880-1925." *Connecticut History Review* 59, no. 1 (April 1, 2020): 3-39. This reading highlights the tension between the dumping of industrial waste and sewage and activists and court decisions in support of regulation and clean-up. Provides excellent historical accounts of the sources and types of pollutants as well as their impacts in the late 19th and early 20th centuries and the development of public sewer systems.

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<https://yalemaps.maps.arcgis.com/apps/PublicInformation/index.html?appid=1bfd537a633141c88a7ae5446a99024a>.

Fekieta, Joe. "Make Way for MoCACONN!" *New Haven Independent*, February 16, 2022.

[https://www.newhavenindependent.org/article/make\\_way\\_for\\_mocaconn](https://www.newhavenindependent.org/article/make_way_for_mocaconn). New Haven Independent piece arguing for the transformation of English Station into an arts destination including a museum of modern art and event hosting.

Frantzeskaki, Niki, Timon McPhearson, Marcus J Collier, Dave Kendal, Harriet Bulkeley, Adina Dumitru, Claire Walsh, et al. "Nature-Based Solutions for Urban Climate Change Adaptation: Linking Science, Policy, and Practice Communities for Evidence-Based Decision-Making." *BioScience* 69, no. 6 (May 29, 2019): 455-66.

Fuss & O'Neill. "Mill River Watershed Based Plan," September 2018. Report highlighting the Mill River watershed with information on ecology including endangered and threatened species, land use, recreational opportunities and research-based recommendations for future interventions. Produced in conjunction with Connecticut Fund for the Environment and Save the Sound. Portions will be very useful for students learning broadly about watersheds and exploring specific sites on the Mill.

GmbH (<https://www.klokantech.com/>), Klokant Technologies. "New Haven." [www.oldmapsonline.org](http://www.oldmapsonline.org). Accessed July 1, 2023.

Kuhlthau Carol Collier Leslie K Maniotes and Ann K Caspari. 2015. *Guided Inquiry : Learning in the 21st*

*Century* Second ed. Santa Barbara California: Libraries Unlimited an imprint of ABC-CLIO LLC. Chapter 1 provides a useful overview of the guided inquiry process with examples.

Murphy, Atticus W. and Elizabeth E. Crone. 2021. "Pollinator Gardens: Landscaping for Biodiversity in the 21st Century." CREATE Solutions for a Changing World, no. 1. Medford, Mass.: Tufts University.

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<https://www.oldmapsonline.org/map/usgs/5565692>.

Gurwit, Rob. "Death of a Neighborhood." *Mother Jones*, 2000.

Article documents the impact the building of the Oak St Connector had on the community and the legacy of Richard Lee's Urban Renewal accomplishments.

Honey, F. R. "New Haven in 1641." Wikimedia Commons, 1880.

[https://commons.wikimedia.org/wiki/File:Atwater1881\\_p10\\_Map\\_New\\_Haven\\_in\\_1641.jpg](https://commons.wikimedia.org/wiki/File:Atwater1881_p10_Map_New_Haven_in_1641.jpg).

iiif.lib.harvard.edu. "Harvard Image Delivery Service." Accessed July 1, 2023.

<https://iiif.lib.harvard.edu/manifests/view/ids:5271648>.

Kardasz, Sara. "Inquiry Learning." New York State Education Department. Accessed July 4, 2023.

<https://www.nysed.gov/curriculum-instruction/teaching-learning-inquiry-learning>.

Kimmerer, Robin Wall. *Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and the Teachings of Plants*. Minneapolis, Minnesota: Milkweed Editions, 2013. Resource for extended reading. Highlights the connections between Native knowledge, science, and the lived experience.

Library of Congress, Washington, D.C. 20540 USA. "A Plan of the Town of New Haven : With All the Buildings in 1748 Taken by the Hon. Gen. Wadsworth of Durham to Which Are Added the Names and Professions of the Inhabitants at That Period : Also the Location of Lots to Many of the First Grantees." Accessed July 1, 2023.

Maynard, Preston, Marjorie B Noyes, and New Haven Preservation Trust. *Carriages and Clocks, Corsets and Locks : The Rise and Fall of an Industrial City--New Haven, Connecticut*. Hanover, N.H.: University Press Of New England, 2004. Collection of histories, essays, and photographs. Great resource for industrial history of New Haven. Photographs are incredible useful, as many of the buildings highlighted still exist in the Mill River District and throughout the city.

Mullen, Arthur. "New Haven's Great Park." Roger Sherman house, September 5, 2019. Secondary source with a number of high quality historical images including paintings, engravings, and photographs. Also includes a number of quotes from historical documents and figures connected to the history of East Rock. Can be used as a basis for comparison between the historical and contemporary.

Mitchell, Donald G. "Hints for the Layout of East Rock Park: A Report to the Commissioners on Lay-out of East Rock Park." New Haven (Conn.): East Rock Park Commission. May 1882 Great way to look at proposed vs actual. This map also shows the configuration of the Eli Whitney Manufacturing complex as of 1882 in the context for a proposed layout of East Rock Park.

"New Haven Mill River Report," May 2013. Includes context and a variety of plans for future restoration/redevelopment of industrialized portions of the Southern Mill River. Portions will be used by

students as source material for final lesson advocating for future plans on this site along with Ball Island and English Station.

Passapera, Daniel. "A Look into the Conservation Efforts on Hamden's Mill River." HQNN.org, December 5, 2022. Title explains the bulk of the article. Useful for students as well as educators.

Patagonia. "DamNation." *Vimeo*, March 15, 2014.

Documentary exploring this history of dams in the United States and advocating for their removal.

Richmond.edu. "Mapping Inequality," 2019. Redlining maps of many cities throughout the country, including New Haven.

Robert Barratt, and Elisabeth Barratt Hacking. "Place-Based Education and Practice: Observations from the Field." *Children, Youth and Environments*, vol. 21, no. 1, 2011, pp. 1-13. *JSTOR*, <http://www.jstor.org/stable/10.7721/chilyoutenvi.21.1.0001>. Accessed 30 May 2023. Collections of ideas, examples, and benefits of place-based education.

Rubin, Elihu. "A People's Guide to Infrastructure in New Haven." [campuspress.yale.edu](http://campuspress.yale.edu). Accessed July 5, 2023. <https://campuspress.yale.edu/infrastructurenewhaven/>.

Sharp, Penelope, Ralph Lewis, David Wagner, and Cara Lee. "Bulletin No. 41: Trap Rock Ridges of Connecticut: Natural History and Land Use," 2013.

Smeaton, Fiona, "Strategies for Urban Pollinator Management Using Habitat Monitoring and Restoration Planning in Portland Oregon" (2020). Master of Environmental Management Project Reports. 58. [https://pdxscholar.library.pdx.edu/mem\\_gradprojects/58](https://pdxscholar.library.pdx.edu/mem_gradprojects/58) <https://doi.org/10.15760/mem.60>

Spring 2021, Gabe LePage, Leah Snavelly, Sherry Xu, and Jiaying Yan | ENV 788. "Brownfields in New Haven." ArcGIS StoryMaps, May 14, 2021. <https://storymaps.arcgis.com/stories/e10107f8e5144389918cf2fb41b84e58>.

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The New Haven Preservation Trust. "Quinnipiac River." Accessed May 23, 2023. <http://nhpt.org/quinnipiac-river>.

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Turmelle, Luther. "Could Housing Be Built at New Haven's Former English Station Power Plant Site? That Depends." New Haven Register. New Haven Register, November 9, 2021. <https://www.nhregister.com/news/article/Could-housing-be-built-at-New-Haven-s-former-16604952.php>.

Uinet. "English Station Remediation." Accessed June 3, 2023.

<https://www.uinet.com/w/english-station-remediation>.

Utile, Inc., Ninigret Partners, Nelson\Nygaard Consulting Associates, and Stoss Landscape Urbanism. "Mill River District," June 2013.

Weir, John Ferguson. *New Haven from East Rock*. 1915. Oil on canvas. New Haven, Connecticut. New Haven Museum.

Wessels, Tom, Brian D Cohen, and Ann H Zwinger. *Reading the Forested Landscape : A Natural History of New England*. New York The Countryman Press, 1999. This whole book is great and highlights the way patterns of forest growth and succession can tell us stories about the past. Chapter 1 for use with students before work in the field at East Rock.

Whitney Arms Company, Van Slyck Steel Engraving, 1880 from *American Inventions and Improvements in Breech-Loading Small Arms* Image shows Whitney Arms Company buildings, dam, and East Rock 1880.

Whitneyville Armory, Whitney's Improved Fire-Arms, from an advertisement, ca. 1862 - Library of Congress, Prints and Photographs Division Poster of Whitney's Improved Fire-Arms shows waterfall in background, armory, and Whitney Peak. 1862.

Cronon, William, *Nature's Metropolis*, ("Rails and Water"), 55-93. Background reading which traces the impact of transportation of goods via water and then rail to and from Chicago. Interesting ideas around the way these technologies shaped the way people viewed time, labor, and transportation. Connections to be made to New Haven with the Farmington Canal and then Rail line as well as the rail hub.

williamcronon.net. "William Cronon - 460 Place Paper Assignment." Accessed June 27, 2023.. This website is a digital version of an assignment from Professor William Cronon. I am including this as an example of one of the ways I am hoping students can learn to use historical primary sources in combination with contemporary knowledge and personal experience to more deeply understand a place. This will be combined with visual representation of the location as well.

Wood, John. "More 'Urban Removal?'" *Yale Daily News*, May 4, 1967.

———. "TheScene (First of a Three-Part Series on Proposed Highway Construction in New Haven, the People Who Are Fighting It. Andwhatit Will Mean for Yale)," n.d. Accessed June 26, 2023.

Wood, John. "Highways to Gird Yale." *Yale Daily News*, May 2, 1967. First article in a series of 3 examining proposals for a beltway highway connecting I-91 with Rt 34 Connector.

www.davidrumsey.com. "New Haven Harbor.," 2023.. Map showing the coastline of New Haven Harbor and oyster beds.

www.eliwhitney.org. "The Armory | the Eli Whitney Museum and Workshop." Accessed July 1, 2023. Secondary source overview of the Eli Whitney Museum, Armory, and the worker community of Whitneyville. Includes embedded primary sources.

www.kurumi.com. "The East Rock Connector." Accessed May 1, 2023. Secondary source with map describing proposal for Est Rock Connector, resistance to the project, and eventual rejection. Students can use the map included in combination with contemporary maps to compare and find connections.

www.newhavenct.gov. "Board of Alders / Legislative Services | New Haven, CT." Accessed July 4, 2023.  
<https://www.newhavenct.gov/government/departments-divisions/board-of-alder>.

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<https://yaledailynews.com/blog/2018/02/04/urban-renewal-in-new-haven/>.

## Appendix on Implementing District Standards

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This unit is wide ranging in its scope of academic skills necessary. Although it is a history class by nature, in practice we spend much of the time also looking at our current reality and, in the final lesson practicing the skills of civic engagement. Because of this, the standards listed below are also wide ranging.

### Connecticut Common Core Standards

CIV 9–12.7 Analyze historical, contemporary, and emerging means of changing societies, promoting the common good, and protecting rights.

INQ 9–12.1 Explain how a question reflects an enduring issue in the field

INQ 9–12.4 Explain how supporting questions contribute to an inquiry and how, through engaging source work, new compelling and supporting questions emerge.

INQ 9–12.5 Determine the kinds of sources that will be helpful in answering compelling and supporting questions, taking into consideration multiple points of view represented in the sources, the types of sources available, and the potential uses of the sources.

### The Role of Connecticut in U.S. History

- Explore the history of individual Connecticut cities and towns.
- Explore how Connecticut contributed to various key events in United States history, such as industrialization.
- Evaluate the political, economic, and social impact of key Connecticut industries on the state and national economies.

### The Impact of Science and Technology on Society

- Evaluate how science and technology changed everyday life for Americans.
- Analyze how society reacted to environmental challenges over the past century.
- Evaluate the benefits and challenges of science and technological change from the 20th century to the 21st century

## Notes

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- <sup>1</sup> Barratt, and Elisabeth Barratt Hacking. "Place-Based Education and Practice: Observations from the Field." *Children, Youth and Environments*, vol. 21, no. 1, 2011, pp. 1-13. *JSTOR*, <http://www.jstor.org/stable/10.7721/chilyoutenvi.21.1.0001>. Accessed 30 May 2023
- <sup>2</sup> Robert Barratt, and Elisabeth Barratt Hacking. "Place-Based Education and Practice: Observations from the Field." *Children, Youth and Environments*, vol. 21, no. 1, 2011, pp. 1-13. *JSTOR*, <http://www.jstor.org/stable/10.7721/chilyoutenvi.21.1.0001>. Accessed 30 May 2023.
- <sup>3</sup> William E. Devlin, "Rivers of Outrage: The Forgotten Fights over Stream Pollution in Late Nineteenth-Century Connecticut, 1880-1925," *Connecticut History Review* 59, no. 1 (April 1, 2020): 3-39, <https://doi.org/10.5406/connhistrevi.59.1.0003>.
- <sup>4</sup> William E. Devlin, "Rivers of Outrage: The Forgotten Fights over Stream Pollution in Late Nineteenth-Century Connecticut, 1880-1925," *Connecticut History Review* 59, no. 1 (April 1, 2020): 3-39
- <sup>5</sup> John Wood, "More 'Urban Removal?,'" *Yale Daily News*, May 4, 1967.
- <sup>6</sup> John Wood, "More 'Urban Removal?,'" *Yale Daily News*, May 4, 1967.
- <sup>7</sup> "The East Rock Connector," [www.kurumi.com](http://www.kurumi.com), accessed May 1, 2023, <https://www.kurumi.com/roads/ct/eastrock.html>.
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- <sup>9</sup> Kuhlthau Carol Collier Leslie K Maniotes and Ann K Caspari. 2015. *Guided Inquiry : Learning in the 21st Century* Second ed. Santa Barbara California: Libraries Unlimited an imprint of ABC-CLIO LLC. Chapter 1 provides a useful overview of the guided inquiry process with examples.
- <sup>10</sup> Teton Science Schools, "Getting Started with Place-Based Education, Step-By-Step," Teton Science Schools, September 19, 2019, <https://www.tetonscience.org/getting-started-with-place-based-education-step-by-step/>.

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