Sentinels of Our Shores
Teacher Guide
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### On the cover:

*Fort Tompkins and Fort Wadsworth* by Seth Eastman, 1870-1875. From the collection of the U.S. House of Representatives. Photo courtesy of the Architect of the Capitol. For use in educational or scholarly purposes only.
What Every Teacher Needs to Know

We welcome your class to the National Parks of New York Harbor Education Center!

Program Location: The program takes place at the NPNH Education Center on Staten Island, a fully accessible site located on the third floor of the old Army barracks at 210 New York Avenue in Fort Wadsworth. Classes can eat lunch either at our Learning Lunchroom, where children learn about recycling, or at an outdoor picnic area. (Food, vending machines, microwaves and refrigerators are not available.)

Cancellation Policy: If your plans need to change, please contact us as early as possible so we may offer the date to another class.

Teacher and Chaperon Roles: In our program, everyone participates—including the grownups! Teachers and chaperons are essential to the success of this program. You will help students complete activities during the on-site program.

That is why we REQUIRE one adult for every six students to attend with your class. Please give chaperons the Chaperon Job Description, found on the left-hand side of this folder, prior to the day of the trip.

Questions: Please contact us at (718) 354 – 4530. We also welcome email: a business card is provided in this packet with a Park Ranger’s name, number and email address.

Program Overview and Objectives

Overview

The educator-led program Sentinels of Our Shores engages students’ social studies, science, math and language arts skills with curriculum-based activities.

This program focuses on the defense of New York Harbor in the early to mid-19th century. Even today, many historic forts surround New York Harbor. Battery Weed and Fort Tompkins on Staten Island, Forts Hamilton and Tilden in Brooklyn, Fort Totten in Queens, Castle Clinton in Manhattan and Castle Williams on Governors Island all stand as reminders of New Yorkers’ determination to defend their harbor and their rights. (All, except Forts Totten and Hamilton, are now preserved as units of the National Park Service.)
Theme

In the early 19th century, a network of fortifications protected New York Harbor from invasion by sea. New technology improved both the building of forts and the use of cannon.

Objectives

After participating in the pre-visit activity (*Escape to Freedom*), the on-site program, and post-visit activity, students will be able to:

- Explain why New Yorkers were concerned about protecting their rights from a possible foreign invasion by sea.
- Give two examples of how military technology changed over time.
- Read an historic map of New York Harbor.
- Identify two strategic locations to place forts in New York Harbor.

Essential Question

How can a young nation defend itself against a nation with great military, political and economic power?

On-Site Program Description

*Sentinels of Our Shores* is a 90-minute program consisting of four workshop elements.

*From Sail to Steam* provides students with a creative way to evaluate the effectiveness of both sailing and steam vessels and helps them understand how this change increased the need for more effective defenses.

*Technology Changes* uses state science tests as a template for experiments that students conduct to discover how to create a more accurate defense system.

*Defend New York* challenges students to evaluate the network of forts left over from the early 19th century and to decide where to construct newer, better forts. As a class, they discuss their choices and select the five best locations for new forts for New York Harbor.

*Plan and Protect*, our culminating activity, challenges students to use their new expertise in fort shapes, cannon operation and geography to plan fortifications for the harbor in Charleston, South Carolina.
Pre-Visit and Post-Visit Activities and Classroom Extensions

Pre-Visit Activity: *Escape to Freedom* (Grade 4) & DBQs (Grade 5)
The pre-visit activity, *Escape to Freedom*, is available to classes three weeks before your visit. The game serves as an excellent introduction to New York during the American Revolution for fourth grade and a review of the conflict for fifth grade. Fifth grade classes may, instead of playing the game, choose to do the Document Based Questions (DBQs) One and Three, found at the back of this teacher guide as their pre-visit activity. These map activities focus on conflicts between the US and Canada and fit nicely with Unit Five of the fifth grade NYC DOE Social Studies Scope and Sequence, and NY State Standard 4.1 Westward Expansion.

*Escape to Freedom*
Please return the game to us on the day of your *Sentinels* program. By playing this board game, *Escape to Freedom* prepares students for the on-site program in two ways:
- Students learn **map-reading skills** and the geography of New York Harbor.
- Students learn what happens when New Yorkers lose their freedoms to an enemy occupation, as they did during the American Revolution. This explains why forts were built all around New York Harbor after our independence was secured.

*Escape to Freedom* takes place in July 1777, early in Great Britain’s seven-year-long military occupation of New York City, Staten Island and most of Long Island. Students play the role of patriots who have been imprisoned by the British Army. They receive no lawyer and no trial. Their “crimes” include defending one’s church from destruction by the British or resisting having an officer live in one’s house. Each of these “crimes” is actually a right now guaranteed under the Bill of Rights (passed by Congress right here in New York City in 1789). Students must escape to New Jersey, where General Washington heads the Continental Army. Along the way they meet secret patriots—real historic heroes who lived here during the Revolution—and a few scoundrels! Students make constant choices between safer and riskier strategies.

Extended *Sentinels* Visit: A Tour of Battery Weed
An optional activity is available that can be completed after lunch. This 30-minute activity and tour of Battery Weed, the mid-19th century fort facing the Narrows, extends the lessons from the program. *This must be arranged either when you make your reservation or shortly thereafter*. Same-day requests cannot be accommodated.

Extended *Sentinels* Visit: Overlook Activity
If you have time either before or after your visit, take your students to the Overlook at Fort Wadsworth for a resource-based activity. Handouts for this activity are included in this folder.

Post-Visit Activity: Document Based Questions
Fourth grade classes may wish do study DBQ Number Two found at the back of the teacher guide. This DBQ fits nicely with Unit 6 of the NYC DOE Scope and Sequence, and NY State Standard 1.1a: Improvements and inventions in transportation.
Why Does New York Harbor Have So Many Old Forts?
An Historic Overview for Teachers

“To be prepared for war is the most effectual means to promote peace.” –George Washington

During its first century, the United States feared invasion by more powerful enemies. Since the U.S. frequently clashed with Great Britain, military planners saw the powerful British Navy as their primary enemy. New York was a tempting target because so much trade flowed through its port. New Yorkers, who experienced British occupation during the Revolutionary War, were determined not to repeat the experience. [Note: All places and names shown in bold indicate a site now preserved by the National Park Service.]

Young America Shakes Hands with the World: 1783-1806

Even after British vessels evacuated New York Harbor on November 25, 1783, they were never far away. The new United States shared a long, although not well-defined, northern border with what mapmakers labeled “British North America.” Indeed, many Loyalist New Yorkers who sailed into exile on Evacuation Day resettled in what we now call Canada. The British Navy, with nearby ports in Bermuda, Jamaica and Halifax, Nova Scotia, still “ruled the waves” of the Atlantic.

In the words of Thomas Paine, an independent United States would “shake hands with the world—live at peace with mankind—and trade to any market where we can buy and sell.”¹ New York merchants set sail to markets forbidden by their former colonial masters, from the West Indies to China. These new markets made New York the richest port in the young nation.

Yet America’s main trading partner was still Great Britain, the world’s largest economy at the time. Meanwhile, British banks made loans to American businesses and even to state governments. Trade and business made war undesirable for both nations.

Yet, from 1783 through 1867, trade and territorial disputes frequently erupted between the young republic and the mighty empire. While the U.S. had other conflicts that led to war (Mexico, 1846) or came close to war (France, 1798), fear of invasion or bombardment by British warships defined American military policy for almost a century. The forts in New York Harbor were built primarily to confront the mighty British Navy (see above map).

The (British) Empire Strikes Back: 1806-1816

Several New York forts were built in the aftermath of a bloody episode in New York’s outer harbor. In 1806, while Britain fought Napoleon’s army in Europe, three British warships blockaded New York Harbor to prevent American trade with France. One of these vessels, the Leander, fired a shot that

¹ Thomas Paine, “The American Crisis, III.”
killed an American sailor. John Pierce’s body was “borne through the principal streets, in the midst of universal excitement, anger and cries for vengeance. Black Streamers were displayed from the houses; shops were closed…A public funeral was attended by the whole population.”

After the *Leander* incident, New York State began building forts in earnest to protect the harbor. Jonathan Williams, head of the West Point Academy, designed innovative forts for the city, including Castle Williams at Governors Island and Castle Clinton in Manhattan. Curved walls, seven to eight feet thick, supported three tiers of cannon. The new forts complemented existing star-shaped earthen forts dug by volunteers in the 1790s. But were they enough? New York Mayor DeWitt Clinton noticed that an invasion fleet could land on Long Island and march troops westward to occupy New York City.

During the War of 1812, the British fleet again blockaded the city. Fort Richmond on Staten Island, one of three forts that protected New York Harbor at the Narrows, fired warning shots at a British frigate. Sandy Hook, New Jersey—the entrance to the harbor’s shipping lanes—witnessed two skirmishes.

After the British seized and burned Washington, DC, in August 1814, their Navy gathered outside New York Harbor. In a speech at City Hall (near the former Provost Prison), former mayor Marinus Willett reminded New Yorkers of the dark days of occupation, with “press gangs traversing these streets, and dragging men from their houses on board ships of war.” Mayor Clinton rallied New Yorkers to defend their city with shovels as well as arms. Day and night, at Throggs Neck and Gowanus Creek, teachers, weavers, Irish immigrants and free African-Americans dug massive earthen defenses. The nearby invasion fleet saw this work and sailed south, to Baltimore. Thanks to its citizens, New York was spared.

**“Manifest Destiny” vs. the World’s Largest Navy: 1816-1846**

Peace came a year later. The damage to America’s economy caused by the war took years to repair itself. A long quarrel over trade practices further hurt the economy, leading the U.S. to depend less on British trade. The U.S. imposed tariffs that protected its own infant industries from British competition. However, repelling the invasion had also inspired American pride and nationalism. Americans began to embrace “Manifest Destiny”—a United States that would stretch from California to New York.

Meanwhile, British military planners reconsidered their strategy. They feared that the U.S. and other nations would perceive them as weak if they compromised too much or lost territory. Americans had invaded Canada twice, in 1776 and again in 1812. Would the Yanks try again? With its larger population, the U.S. had the advantage fighting on land. Invading America in 1814 had cost thousands of British
lives. But British warships could still blockade U.S. ports—as they had prior to the War of 1812—or bombard its cities and ruin its economy. America’s “shipping and ship-yards. . .might be destroyed or seized; until our whole coast and commercial marine should be utterly laid waste.”

By the 1830s, the British Navy also had a powerful new technology: the steamship. Steam-powered warships, which did not need wind to travel, made the world’s biggest navy even more powerful. President John Tyler noticed these “new elements. . .employed in the propelling of ships” required “erecting and finishing. . .fortifications.” Forts planned as early as 1821 had never been funded.

As the busiest port in the nation, New York was “in greater danger of being laid under [siege] than any other city on the coast, unless its fortifications are considerably extended.” An 1841 British Admiralty report recognized New York as a primary target: the city was the hub of the northeastern economy, thanks to its access to the Erie Canal and the Hudson River.

Twice in the 1830s, citizen actions on both sides of the border nearly provoked war. In 1837, U.S. sympathizers smuggled arms to a Canadian rebel group aboard the steamship Caroline, which the British captured and sent crashing over Niagara Falls. One American was killed. New York State captured and indicted a Canadian sheriff, Alexander MacLeod, for murder. Britain threatened war if MacLeod was found guilty, but he was acquitted. Two years later, Americans in Maine stopped the British from building a strategic road over disputed territory. The U.S. sent troops to Maine to control its own citizens. In 1842, a treaty settled borders from Maine to Minnesota. The U.S. gained more land, while the British could finish building the road for their troops.

In 1844, James K. Polk was elected president with the slogan “54’40 or fight!” This would have included all of present-day British Columbia, up to the tip of Alaska, or “Russian America.” Polk appealed to Americans’ “just and dear territorial rights, their own self-respect, and their national honor.”

However, when the U.S. declared war in 1846, it was not against Britain. When Texas became a state that year, its disputed southern border ignited a brief but bloody war with Mexico. The U.S. seized one-third of Mexico—land that became the states of California, Arizona, New Mexico, Nevada and Colorado.

Meanwhile, Britain and the U.S. compromised over the Oregon territory, settling the boundary at the 49th parallel. In Polk’s single four-year term, the U.S. gained full title to its entire Pacific coastline. America now stretched “from sea to shining sea.”

**A Fort-Building “Arms Race”: 1846-1865**

The boundary disputes between Britain and the U.S. helped spur a fort-building “arms race.” While the British built fortifications in Halifax, Nova Scotia, U.S. Army engineers placed forts at the mouth of every major American port. Ironically, many were built with granite from Maine.
The U.S. Army led a series of experiments with cannon, firing cannon at different angles and with different amounts of gunpowder to increase the range of cannon fire. Cannon with a longer range of fire would be more effective against fast-moving steamships. Chief Army Engineer Joseph Totten fired cannon at stone or brick walls to test what material built the strongest fort. (NOTE: Students will conduct similar experiments during your on-site program.) His engineers designed forts in the shape of trapezoids, which allowed more firepower across New York’s shipping channels.

Totten designed a new Fort Richmond (now called Battery Weed) and Fort Tompkins on Staten Island and replaced Fort Lewis in Brooklyn with Fort Hamilton. Star-shaped Fort Wood on Bedloes Island (the future base of the Statue of Liberty) and Fort Jay on Governors Island were prepared as an inner harbor secondary defense. Two older forts, Castles Clinton and Williams received more powerful guns. Before it reached New York City, a steamship speeding through the Narrows would face a mile-long volley of over 200 cannonballs.

During the Civil War, Army recruits trained and served at several area forts. Ironically, forts built with the British Navy in mind protected New York from attack by their own countrymen: two Confederate warships, including the Alabama, almost breached the harbor. The forts were also used to train Union soldiers and to hold prisoners of war. Tensions between Britain and the U.S. remained high during the war. Britain agreed to build steam warships for the Confederacy. Americans seized the Trent, a British ship with two Confederate diplomats on board. Canadians worried that the Union Army might cross their own border once the Civil War ended. Fear of American military power spurred the British in 1867 to give its North American provinces home rule under a new confederation, the Dominion of Canada.

**Technology Sails Past the Mighty Forts: After 1865**

Decades later, some Americans still dreamed of war with Britain. Just six years before his presidency, Theodore Roosevelt wrote that “the greatest boon I could confer upon this nation” would be “an immediate war with Great Britain for the conquest of Canada…I will do my very best to bring about the day…”

(Ironically Roosevelt’s own uncle, James Bulloch, obtained the Alabama for the Confederacy—the same warship that threatened New York City, where young Theodore was born and raised.)

But most Americans probably felt differently. After the Civil War, Britain agreed to pay for damage to the U.S. fleet inflicted by each British-built Confederate ship. Home rule in Canada also lessened tension. While not fully independent of Great Britain, Canada proved to be a peaceful neighbor.

Meanwhile, new weapons technology made America’s forts obsolete within a few short decades. Granite forts that were supposed to last for centuries could not accommodate larger, more powerful cannon. By the 1880s and 1890s, the U.S. Army had largely abandoned the mighty forts, leaving them to battle the forces of weather and time.

**Sentinels of Our Shores: Vocabulary List**

**Angle:** Formed when two lines start at the same point, but go in different directions.

**Battery:** A row of cannon.

**Blockade:** When a harbor is closed off to keep other ships from entering or leaving.

**Cannon:** Large guns that shoot heavy metal balls, called cannonballs.

**Charge:** A bag filled with gunpowder, put in the cannon before the ball goes in.

**Defend:** To protect from attack or danger.

**Degrees:** A unit that measures the width of an angle. You write “15 degrees” like this: $15^\circ$.

**Depth:** In the sea, the distance between the top of the water and the bottom of the ocean.

**Fleet:** A group of ships or vessels, such as a *fleet* of warships.

**Gunpowder:** A fine powder that burns very quickly. This burning powder creates hot gases. The gases can push a cannonball out of the cannon very fast.

**Harbor:** A safe place for ships near a coast.

**Invasion:** When an enemy army or navy enters a place by force.

**(The) Narrows:** The water between Staten Island and Long Island, only about two miles wide.

**Occupation:** When one country’s army stays in another country to run things.

**Port:** A city or town with a *harbor* deep enough for ships to sail in and out.

**Range:** The distance that an object, such as a ship or a cannonball, can travel.

**Sentinel:** A soldier or guard that watches to make sure an enemy does not come near.

**Shipping channel:** Part of a harbor deep enough for large ships to pass through.

**Steamship:** A ship, or vessel, which uses an *engine* powered by steam.

**Vessel:** A boat or ship
Document-Based Question 1: Map from 1783

Directions: Look at both maps. The map on the left is from 1783. The map on the right shows the same area today. Use information from the maps to answer the questions below.

Historical Background: The United States and Great Britain signed a peace treaty to end the American Revolution in 1783.

1. List two differences you see between the United States in 1783 and the United States today.

2. In the 1783 map, two nations had land that bordered the United States. Name them both.
Document-Based Question 2: Steamships

Directions: Read the document. Use the information from the document to answer the questions below.

Historical Background: In the 1840s, the British Navy started to build new ships. These ships ran on engines powered by steam. While sailing ships needed wind to move, steamships could always move at the same speed.

(NOTE: If a ship was covered with iron, it was called an “iron-clad.” Iron-clad ships were harder to sink than wooden ships.

“Indefensible” means something cannot be defended.

A “bird on the wing” is a bird in flight.)

“We have [built] fortifications…for the purpose of destroying wooden vessels, now we must find guns that will sink iron-clad ones or our ports are indefensible…Hitting [a steamship by shooting a cannon]…is very much like hitting a bird on the wing with a bullet. But if they can be [stopped] it must be by forts…[that have] cannon too heavy for ships.”


1. Why is shooting a ship with a cannon like “hitting a bird on the wing”?

2. Cannon used at forts can be heavier than cannon on ships. How does that help forts?
Document-Based Question 3: Oregon

Directions: Look at the two maps and read the quote by President James K. Polk. Use the maps to answer Question 1. Use the quote to answer Question 2.

Historical Background: The left map shows all the land claimed in North America by Great Britain in 1846. The right map shows the northern border claimed by the United States in 1846.

In 1844, James K. Polk was elected president of the United States. On the day he was sworn in as president, he made a speech. He said, “Our title [our right] to . . . Oregon is ‘clear and unquestionable.’” He also said that Americans should spread out over more of North America. This would give the United States more “strength and security.”

1. Compare the map on the left with the map on the right. Circle the part on each map where Great Britain and the U.S. claim the same land (where the maps overlap).

2. Reread the quote and look at what you circled. Why would Great Britain be upset by President Polk’s speech?
New York State Standards & Core Curriculum, Grades 4 & 5

Social Studies
Grade 4
Pre-visit Escape to Freedom Game
Unit 3 Colonial and Revolutionary Periods & Unit 4 The New Nation
  • Standard 1.1: History of the United States and New York
  • Standard 3: Geography
  • Standard 5: Civics, Citizenship and Government.

Sentinels of Our Shores
Unit 6 Growth and Expansion
  • Standard 4.1d Emergence of New York as an economic powerhouse

Grade 5
Pre-visit Document Based Questions
  • Standard 3.1: Manifest Destiny and westward expansion

Sentinels of our Shores
  • Standard 3.1: Manifest Destiny and westward expansion
  • Standard 4.1: Key turning points in the histories of Canada, Latin America, and United States

Mathematics, Science and Technology
Grade 4
  • Standard 3.5: Measurement (“use statistical methods such as graphs, tables, and charts to interpret data,” “understand the attributes of…length…and angle.”)
  • Standard 3.6: Uncertainty (“predict experimental probabilities.”)
  • Standard 5.6: Impacts of Technology

Grade 5
  • Standard 1.1: Formulate questions of scientific inquiry
  • Standard 1.2 Design and conduct scientific investigations to answer those questions

English Language Arts
  • Standard 1: Students will read, write, listen and speak for information and understanding.
    Examples from Core Curriculum:
    o Read and understand written directions.
    o Locate information in a text needed to solve a problem.
    o Identify and interpret significant facts taken from maps, graphs, charts and other visuals.
    o Speak to share data, facts and ideas in …small group interactions, class discussions…
    o Speak in order to express an opinion.

  • Standard 3: Students will read, write, listen and speak for critical analysis and evaluation.
    Examples from Core Curriculum:
    o Use decoding strategies, such as sounding out words…
    o Speak to express opinions and judgments in…class and group discussions.
Resources

Literacy-Based Learning: Books Students Can Read

About the Revolutionary War (fiction)
- *Phoebe the Spy* by Judith Berry Griffin. Based on debatable historic evidence.
- *The Hollow Tree* by Janet Lunn. A Canadian point of view of the American Revolution.

About the Bill of Rights (nonfiction)
- *Constitution Translated for Kids* by Cathy Travis. *(Workbook also available.)*

About the Mexican-American War (also called the War of 1846) or “Manifest Destiny”

Further Research for Adults

- *Seacoast Fortifications of the United States: An Introductory History* by E.R. Lewis.
- *A Legacy in Brick and Stone: American Coastal Defense Forts…* by John R. Weaver.
- *From Parchment to Power* by Robert A. Goldwin. Drafting and passage of the Bill of Rights.

Web Sites

- [http://lcweb2.loc.gov/ammem/](http://lcweb2.loc.gov/ammem/)  

- [http://www.smithsonianeducation.org/educators/lesson_plans/borders.intro.html](http://www.smithsonianeducation.org/educators/lesson_plans/borders.intro.html)  
  Smithsonian Institution’s lesson plans on Manifest Destiny. See also main website: [www.si.edu](http://www.si.edu)

- [http://www.nps.gov/nph/index.htm](http://www.nps.gov/nph/index.htm)  
  National Parks of New York Harbor website. Click on parks for specific site information.

  About “Third System” forts, such as those at Fort Wadsworth

- [http://www.cr.nps.gov/history/online_books/source/is3/is3b.htm](http://www.cr.nps.gov/history/online_books/source/is3/is3b.htm)  
  Gunpowder and cannon overview

- [http://www.nps.gov/fosc/mandest.htm](http://www.nps.gov/fosc/mandest.htm)  
  Fort Scott National Historic Site offers a concise history of Manifest Destiny, with map.