

Reading Literary Nonfiction

Look at this photograph of the Brooklyn Bridge in New York City.

What circumstances do you think led to the construction of this bridge?

ESSENTIAL QUESTION

How are true stories important in understanding significant events of the past?

Consider ►

Why is the variety of cultures in the United States such an important part of the nation's character?

How can this cultural diversity remind us of the importance of freedom?

An Unbreakable Code

FIGURATIVE VS. LITERAL

LANGUAGE In literal language, the words mean the same as their dictionary definitions. Figurative language involves the use of words and phrases to mean something other than their dictionary definitions. Look at paragraph 1. Is the phrase "the target of a surprise attack" literal or figurative language? What about "Americans heard the call of duty"? Explain the difference.

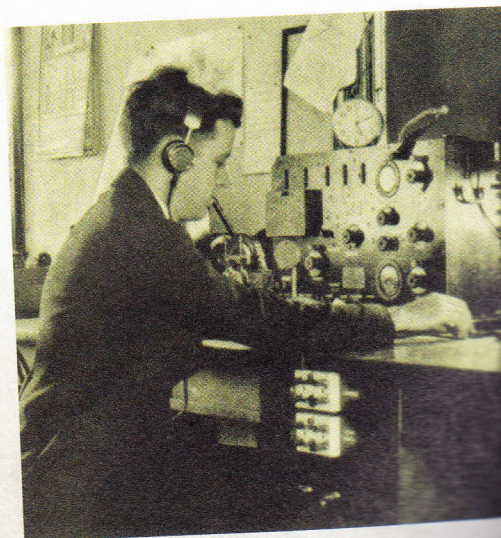
CONTEXT CLUES Context clues are words and phrases around a difficult word that can help a reader determine its meaning. Look at the word *fluent* in paragraph 2. What do you think it means? Which context clues helped you determine the meaning? Now do the same with *decipher*.

1

On December 7, 1941, the U.S. Naval Base at Pearl Harbor, Hawaii, was the target of a surprise attack by the Japanese. When President Franklin Roosevelt and the U.S. Congress entered World War II the next day, many Americans heard the call of duty. More than 3 million people enlisted in the military in 1942. One of them was young Chester Nez, an eighteen-year-old Navajo. He and twenty-eight other Navajo would become known as the "original 29," an elite, top-secret group of Navajo marines that would play a crucial role in helping the United States defeat Japan.

Fighting in the Pacific Ocean was a challenge for U.S. troops, in part because the battlefield included thousands of square miles of ocean. Military aircraft, ships, and ground operations needed to communicate efficiently across these vast distances. Troops transmitted messages to each other using wireless radios. However, the Japanese could tap in to this radio communication. Many Japanese soldiers were fluent in English and could translate these messages. The U.S. military developed a variety of code systems, but either the Japanese could break them, or the codes were so complicated that the U.S. military needed hours to decipher them. American troops needed a simple, unbreakable code.

When a civilian named Philip Johnston learned about the U.S. military's need for an unbreakable code, he had an idea.



The son of a missionary, Johnston had grown up on a Navajo reservation and was one of a small group of non-Navajo who knew their language. He also understood how difficult the language was to learn.

Navajo is purely an oral language with no alphabet. Meanings of Navajo words are carried by their spoken syllables, with slight variations in tone or pronunciation that can completely change the meaning of a word. Navajo was a challenge even to speakers of other Native American languages.

- 5 Johnston thought Navajo would be perfect as a secret U.S. military code, but it would not be easy to convince military officials to agree. The U.S. military had already tried to make use of Native American languages as codes during wartime. Choctaw soldiers tried to send secret messages during World War I, and the Chippewa and other groups had been recruited as messengers at the start of World War II. Students from other countries, including those of U.S. enemies, were already studying Native American languages. Using his deep knowledge of Navajo combined with the availability of Navajo recruits, Johnston was able to convince top military officials to develop a new system. In April 1942, Johnston recruited twenty-nine men from the Navajo reservation in Arizona. These young men were eager to enlist to fight for their country. They did not know that they were about to become the first Navajo Code Talkers.

The new recruits were sent to San Diego to begin the Marine Corps basic training course. Some had never traveled outside the Navajo reservation, ridden on a bus, or seen a large city. Many—including Chester Nez—barely met the weight requirement to be a marine, and at least one new soldier turned out to be only fifteen years old. However, the challenges of herding sheep and hauling buckets of water across vast distances in the Arizona desert had prepared them all for the physical demands of boot camp. They were able to practice military drills for hours and march long distances with heavy packs on their backs. The twenty-nine Navajo members of Platoon 382 successfully completed the seven-week marine basic training course and were ready for their next assignment—to create an unbreakable code.

CONNOTATION AND DENOTATION

Many words can have similar literal meanings, or denotations. However, their connotations—the emotions or attitudes they express—can be different. In paragraph 5, the author describes the young men as *eager* to enlist. How would a reader's impression be different if the author used the word *willing* instead?



MAIN IDEA AND SUPPORTING DETAILS

The main idea is what a text is mostly about. Supporting details help to convey, or show, the main idea. What is the main idea of paragraph 6? Which details support this main idea?

CONCLUSION A conclusion is a decision you make about all or part of the passage based on information from the text, inferences you make as you read, and your prior knowledge. Look at paragraph 7. What conclusion can you draw about the code? Which details support your conclusion?

WORD CHOICE AND TONE Authors choose words that will best convey the information as well as their attitude, or tone, toward the subject. Look at the words used in paragraph 9 to describe the situation on Guadalcanal. Which words help to illustrate the situation to the reader? What is the tone of the paragraph?

INFERENCE An inference is an idea that a reader reaches by putting the information in a text together with what he or she already knows. Look at paragraph 11. What inference can you make about Chester Nez? Which details led you to this inference?

The code they wrote consisted of about two hundred symbols, and it cut communication time from thirty minutes to about twenty seconds. It made clever use of the Navajo language on two levels. First, the group assigned a Navajo word to each letter of the alphabet, from A to Z. For example, the Navajo word for *ant*—*wol•la•CHEE*—stood for the letter A. The code became even more complicated when the Code Talkers added other Navajo words to stand for the same letters. The letter A could be *wol•la•CHEE* (*ant*), *be•la•SA•NA* (*apple*), or *tse•NILL* (*ax*). Next, they assigned Navajo words to frequently used military terms. A fighter plane was *dah•he•TIH•hi*, the Navajo word for *hummingbird*. Submarines were *BESH•lo* (*iron fish*) and battleships were *lo•TSO* (*whales*).

Due to the top-secret nature of the program, no written lists of the code were permitted, and Code Talkers had to both memorize every piece of the code and practice sending error-free messages. The code included such delicate shades of meaning that the slightest error could result in military disaster.

By July 1942, around the time the first Code Talkers were ready for battle, the Japanese were building an airstrip on an island in the South Pacific called Guadalcanal. It was crucial for the United States to place military bases on Pacific islands so the United States could attack Japan directly. U.S. Marines attacked and seized the airfield in August, beginning a series of intense battles on Guadalcanal that were devastating for both sides.

10 Over the next few months, both sides fought to land reinforcements in the area. Finally, in November, the U.S. Navy began to surpass the Japanese in the number of troops stationed on the islands. In early November, Chester Nez and the rest of the first group of Navajo Code Talkers were on their way to Guadalcanal.

On the journey over the Pacific Ocean, Nez reminded himself that the Navajo had always been warriors and protectors of their homeland. Still, at this moment he wondered whether he had made the right decision to leave high school to join the military. But as a warrior, he knew he had to protect his homeland.

On his first night in a foxhole on Guadalcanal, heavy raindrops fell and chilled Nez and his team to the bone. Artillery fire tore through the night, lighting up the sky and shaking the earth surrounding the men in the hole. Nez silently recited a traditional Navajo prayer:

In beauty I walk.

With beauty before me I walk.

With beauty behind me I walk.

With beauty around me I walk.

With beauty above me I walk.

Nez survived this first night in Guadalcanal, as well as every other night he spent in the South Pacific. During combat on the Japanese island of Iwo Jima in February 1945, one of the most decisive battles of the war, Code Talkers successfully transmitted over eight hundred messages in the first two hours of battle. After almost a month of fighting, the United States captured the island. Many members of the U.S. military believe that this victory—and the eventual victory over Japan—would not have been possible without the Navajo Code Talkers.

- 15 Returning from the war, the Code Talkers were heroes—heroes that nobody could know about. The Navajo code project was so secret that it remained classified for over twenty years. When the U.S. government finally declassified the project in 1968, the Navajo Code Talkers were still not officially honored. In July 2001, each of the “original 29” was awarded the Congressional Medal of Honor. The families of those who had died accepted the award in honor of their loved ones. Later that year, every Navajo Code Talker was awarded a silver medal for his unique service to the country.

Chester Nez went on to publish a memoir of his experience as a Navajo Code Talker. As the last living member of the “original 29,” he can be sure that he and his fellow soldiers won an exceptional place in history.

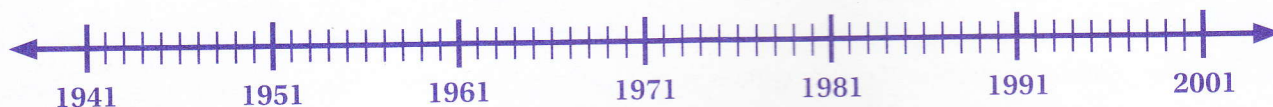
COMPARE AND CONTRAST

When you compare texts, you tell the ways they are alike. When you contrast texts, you tell how they are different. Look at the prayer and the paragraph above it. What feelings does the language in each convey? How are the two different? Why do you think the author placed these two parts of the story next to each other?

SUMMARY A summary tells the most important ideas of a text in a few sentences. Look at paragraph 15. Summarize the experiences of the Code Talkers after the war.

Comprehension Check

Look back at “An Unbreakable Code” to understand the story of the Navajo Code Talkers. Think about the sequence of events that led to this project and the events of its aftermath. Add events to the timeline below to clarify the sequence of events relating to the Code Talkers from 1941 to 2001.



Circle two events that you think would be the most important for people to know about the Navajo Code Talkers and their experience. Then explain your choices.

Vocabulary

Use the word map below to help you define and use one of the highlighted vocabulary words from the Share and Learn reading or another word your teacher assigns you.

marvels	petition	commute
compressed	intervals	jurisdiction
innovation	ingenuity	

Synonyms

Antonyms

My word

Definition

Other forms

My sentence

Consider ►

What structures in the United States help people to stay connected?

Why is it important that people in the United States feel connected?

Bridges with a History

1 *Against the city's gleaming spires,
Above the ships that ply the stream,
A bridge of haunting beauty stands—
Fulfillment of an artist's dream.*

ANALOGY To what does the poet compare the bridge? What about the two are similar?

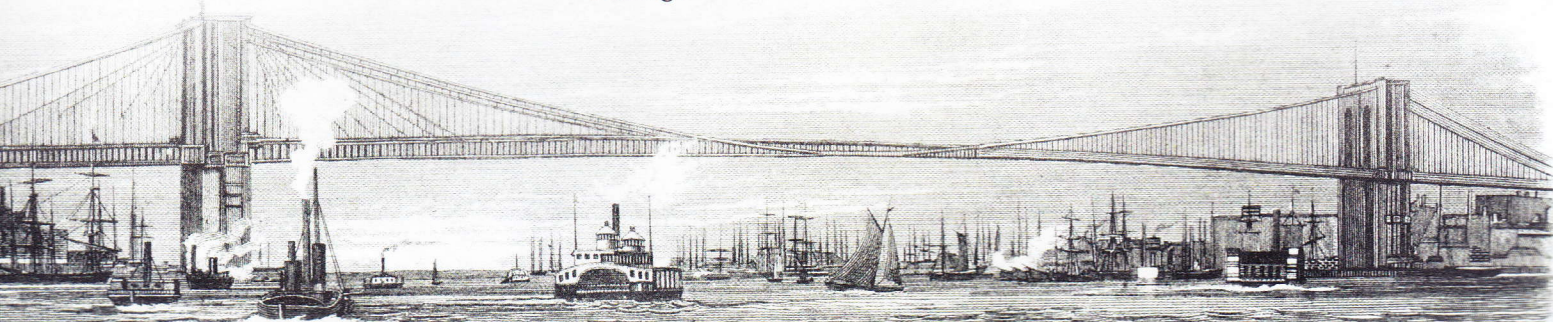
These are the opening words of a poem by David Steinman, a bridge builder, about New York City's Brooklyn Bridge. The same words could also describe California's Golden Gate Bridge. These bridges, standing on opposite ends of the United States, were **marvels** of bridge technology at the time they were built and are still admired today.

The Beginnings of the Brooklyn Bridge

In 1802, the New York newspaper the *Evening Post* published a **petition** signed by the citizens of Manhattan and Long Island, stating that a bridge was needed to connect the two islands. However, the bridge would require massive cables to support it, and at that time, bridge design and architecture was not able to accommodate such heavy cables. Then, in 1867, the state legislature agreed to form a private company to construct a bridge between Brooklyn—the borough¹ at the south end of Long Island—and Manhattan. The city's growing population had been using ferryboats, which were usually crowded and very dangerous in bad weather, to **commute** across the East River. Legend holds that the Brooklyn Bridge's designer, John Roebling, was on a ferryboat during an ice storm when he created its design.

¹**borough** one of five districts of New York City

TEXT STRUCTURE How is paragraph 3 organized? Circle the words and phrases that help to identify the structure of this paragraph.



A Builder for the Bridge

The bridge builder John Roebling was asked to design and manage the project, but before construction began, tragedy struck. Roebling's foot got caught between two planks on a ferryboat slip. His foot was crushed, and he soon died from tetanus. Roebling's son, Washington, took over, but he also suffered misfortune. He developed a crippling disease related to his work on the bridge.

- 5 To carry the weight of the massive cables, the bridge's towers had to be built on the floor of the river. To allow workers to excavate the sediment, hollow boxes were sunk into the river. The boxes were filled with **compressed** air to prevent water from leaking in. But when workers surfaced after digging underwater, their bodies had a hard time readjusting to the lower pressure. Nitrogen bubbles would build up in their blood and their tissues, resulting in what came to be called decompression sickness. Symptoms of this disease ranged from joint pain to paralysis to even death. Along with many workers on the Brooklyn Bridge, Washington Roebling developed this condition. However, he was determined to manage the job from his home. His wife, Emily, studied mathematics and engineering and worked with her husband to direct the project while he recuperated.

Something to Celebrate

When construction of the Brooklyn Bridge was complete, an opening celebration was held on May 24, 1883. Emily Roebling was the first to ride across the bridge. Pedestrians paid one cent to walk along the raised promenade, and eighteen thousand vehicles crossed for a five-cent toll each.

The American poet Walt Whitman described the Brooklyn Bridge as "the best, most effective medicine my soul has yet partaken." At the time of its creation, the Brooklyn Bridge was the world's longest suspension bridge, a bridge that is suspended from cables at each end and at **intervals** in between. It was also unique in that the wires in its cables—each of which was long enough to stretch from New York to London—were made from steel rather than iron. Roebling believed that steel would be an essential building material in the future.

CONNOTATION AND DENOTATION

Three words in paragraph 4 suggest that the building started out as a disaster: *tragedy*, *crushed*, and *misfortune*. How would the interpretation be different if the writer had used these words instead: *accident*, *injured*, and *problem*?

CONTEXT CLUES Reread paragraph 6, and use context clues to determine the meaning of *promenade*. Explain how you determined the meaning.

FIGURATIVE AND LITERAL LANGUAGE

Circle the sentence in paragraph 7 that uses figurative language.

No doubt, people of the day were worried about the safety of such a long bridge. They must have felt somewhat relieved when the circus owner P. T. Barnum paraded twenty-one elephants across the bridge to show off its strength.

Planning the Golden Gate Bridge

Around this time on the other side of the country, residents of San Francisco were using a ferry system to travel across the Golden Gate Strait, where the San Francisco Bay connects to the Pacific Ocean. Many people in this area wished for a bridge across the strait, but most engineers said it couldn't be done. For years, people thought that the project was impossible. However, as ferry traffic increased between San Francisco and Marin County across the strait, the possibility of a bridge was given more consideration.

10 Finally, in January 1923, representatives of the counties surrounding the strait met to discuss ways to move the bridge project forward. The meeting resulted in the formation of the Association of Bridging the Gate, a group of county representatives who took on the task of seeing the project through. Later that same year, legislation was passed that allowed counties to organize as one district, borrow funds, issue bonds, construct the bridge, and collect bridge tolls once construction was complete. Building the bridge would be a Herculean task, but it looked like it might finally become a reality.

Delays to the Project

The U.S. War Department held **jurisdiction** over any construction that might affect shipping routes or military operations. The counties in the bridge district needed to be granted a permit from the War Department in order to begin any bridge construction. The process took up most of the year, but the permit was granted in December 1924.

However, ferry companies were strongly opposed to the project, claiming that the ferry ride was an important time for residents to spend relaxing together between work and home. These companies had enough money to carry out a long campaign against the project, and they successfully shifted opinion against the bridge for several years.

ALLUSION What allusion does the writer use to illustrate the difficult task of building the bridge across the Golden Gate Strait?

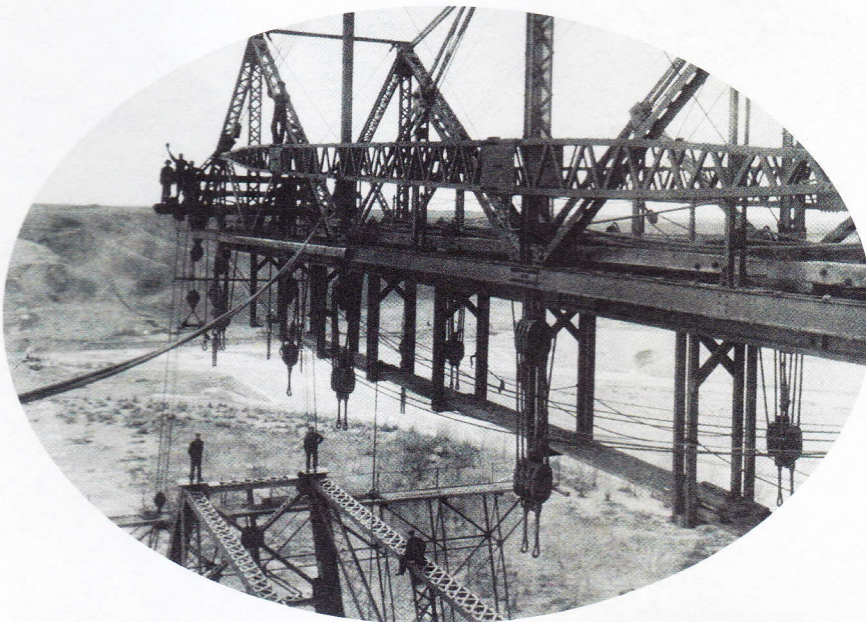
SUMMARY Summarize the section called "Delays to the Project."

Over the next few years, ferry trips grew more and more crowded. The rides became more a source of frustration than relaxation for ferry riders. Opposition to the bridge project began to fade. Finally, in December 1928, the Golden Gate Bridge and Highway District was formed to put the bridge project back in motion.

Choosing a Builder

Joseph Strauss, a respected builder of more than four hundred bridges, had already submitted sketches of plans for a bridge across Golden Gate Strait back in 1921. Strauss was a major voice during the process of getting the project approved, insisting that it could be done more quickly and less expensively than many experts predicted. Strauss's proposal was chosen over those submitted by the country's top engineering firms. Because the project was so complex, many predicted that Strauss would never complete it. However, he fulfilled his longtime dream of bridging the Golden Gate—and the bridge was built faster and at a lower cost than expected.

15 Strauss worked quickly, but he was concerned about worker safety. He established strict rules for his builders. This project was the first that required workers to wear hard hats and glare-free goggles. Also, workers were given cream to protect their skin from the wind. They ate special diets to prevent dizziness. The most important **innovation** was a safety net stretching under the entire bridge. This device saved nineteen workers' lives and is now a standard part of construction regulations in the United States.



INFERENCE What inference can you make about Joseph Strauss? Underline the details that led you to your inference.

MAIN IDEA AND SUPPORTING DETAILS

Write the main idea of paragraph 15 in your own words. Then underline the details in the paragraph that support the main idea.

COMPARE AND CONTRAST

What similarities and differences do you notice about the stories of building the Brooklyn Bridge and the Golden Gate Bridge? In what way is this text structure useful for the reader?

WORD CHOICE AND

tone Circle the words in paragraph 16 about the Bridge Fiesta that you think the author chose to convey the significance of the opening of the bridge. What is the tone of the paragraph?

A Special Event

On May 27, 1937, the opening of the Golden Gate Bridge was celebrated with the Bridge Fiesta. An impressive crowd of two hundred thousand pedestrians crossed the bridge on the ten-foot-wide sidewalks on either side of the magnificent structure. The following day, President Franklin D. Roosevelt pushed a telegraph button from the White House, and a parade of official cars opened the bridge to automobile traffic. Strauss had been right—the project was completed ahead of schedule and below its budgeted costs.

The Bridges Today

At the time of its completion in 1937, the Golden Gate Bridge was the longest suspension bridge in the world, spanning 4,200 feet. Its length is over twice that of the Brooklyn Bridge. Since then, longer suspension bridges have been built around the world, including another one in New York. But these two bridges remain as symbols of engineering expertise and innovative ways of building connections.

Each year, millions of people drive over both of these marvels of human **ingenuity**, and few notice the structures themselves. Others, however, have taken the time to capture them in photographs and poems, which helps us all focus on their usefulness and beauty.

CONCLUSION Based on paragraph 18, what conclusion can you draw about the bridges? Underline the details that led you to your conclusion.



The Golden Gate Bridge, painted a deep orange, is one of the most photographed bridges in the world.

Anchor Standard Discussion Questions

Discuss the following questions with your peer group. Then record your answers in the space provided.

1. “Bridges with a History” traces the successes and obstacles faced by Strauss and the Roebling family. What is one theme that emerges from their stories? Support your answer with details from the selection.

2. What inference can you make about how the “original 29” might have felt when the military asked them to devise a code using the Navajo language? Use details from “An Unbreakable Code” to support your answer.

Comprehension Check

1. Why is the use of both literal and figurative language effective in literary nonfiction? Give examples of both in "Bridges with a History."

2. What innovations have made building bridges safer and stronger?

3. What are the main ideas of "An Unbreakable Code" and of "Bridges with a History"? Compare and contrast these main ideas.

Read On Your Own

Read another literary nonfiction text, "Brave Bessie Coleman," independently. Apply what you learned in this lesson and check your understanding.