

HEROES AND HAPPENINGS

Sixty Stories in Two Volumes from American History

★ Amy Lykosh ★



Volume Two

Illustrated by Stanislav Polish, Mantas Mozeris, Alicia Hartsock, Marina Ryabinina-Tsoy, and Nathaniel Park





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INTRODUCTION

My parents were the consummate homeschool parents. Even when they weren't homeschooling, they were always learning and talking. They read widely, and talked about what they'd learned. When we went on family camping trips, we'd go on every Ranger-led hike and hear every campfire talk possible. When we went to museums, my dad would try to read every sign, and my mom would speed read and interpret for us children. Learning was fun!

It wasn't until I had children of my own that I realized that my mom didn't read aloud the way I did.

I was an English major in college. I learned to *respect the text*. The author wrote what the author wrote for a reason, so my job was to receive it.

I read picture books the same way. The text was the text, the words were the words. Read the words. Maybe repeat the book then.

But that was not how my mom read picture books. For her, the text was a starting point. If a character needed to cross a six-foot stream, my mom would say, "That's about as tall as Grandpa." She would ask my boys about the color of a character's clothes, or have them count animals on a page.

Reading, for my mom, was about connections, about making the words on the page comprehensible and understandable to children.

This extended to other learning. If a child in a story had to walk a mile to school, she'd think of a point that was a mile from the house. If a pioneer was cooking over a wood fire, she would talk about how challenging it would be to cook anything using something as variable as a fire's heat.

In this collection of short biographies and stories, I've tried to demonstrate my mother's incredible connection-building. What does it mean that a microscope magnifies a snowflake 64 to 3,600 times? What does it mean that Henry Knox dragged 60 tons of cannons for 300 miles? How heavy is that?

These short biographies might seem to have bunny trails, leading in unexpected directions. That's intentional, meant to serve as a model of my mother's outstanding style of teaching. May you find yourself making more connections, and thinking of ways to make other readings come to life for your children.

- Amy Lykosh



THE INVENTOR

Today Thomas Alva Edison would probably be diagnosed with Attention Deficit Hyperactivity Disorder, because he needed very little sleep and was always fiddling with something or other.

In elementary school, a teacher called him “**addled**,” and he went home in tears. As he said later, “I found out what a good thing a mother was, she brought me back to the school and angrily told the teacher that he didn’t know what he was talking about. She was the most enthusiastic champion a boy ever had, and I determined right then that I would be worthy of her and show her that her confidence had not been misplaced.”

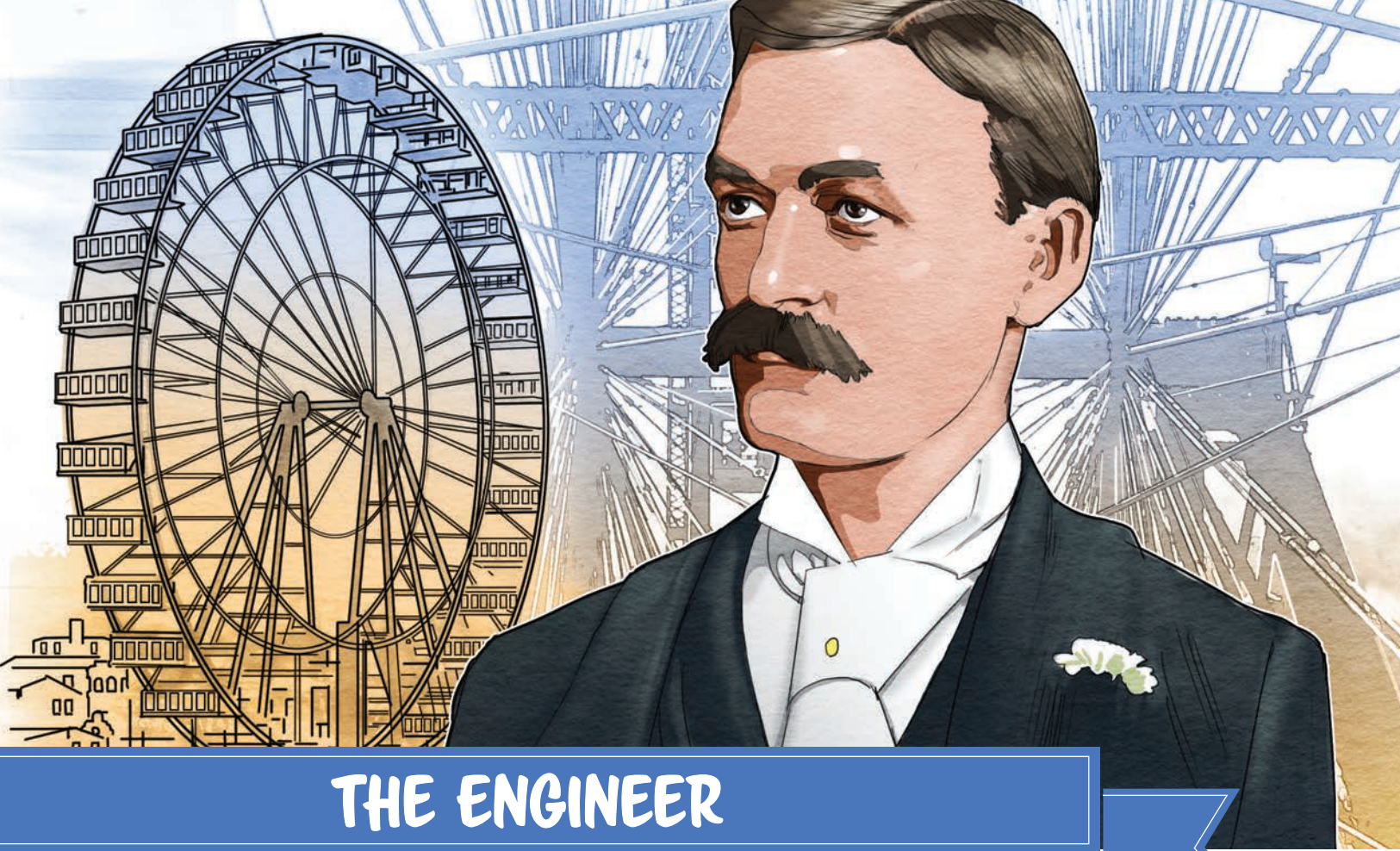
His mother pulled him out of school. As a homeschooler, Edison thrived. He learned to love reading, and when he read about an experiment, he would try it for himself.

At age 12, Edison got a job on the Grand Trunk Railway, selling newspapers and snacks to passengers as they traveled by train between Port Huron and Detroit in Michigan. When he had finished selling, he would sometimes do experiments in the baggage car. Then his chemicals spilled and caused a fire, so that was the end of that.

Thomas Alva Edison

1847–1931

Addled:
“confused” or,
to use a more
modern equivalent,
“stupid.”



THE ENGINEER

George Washington Gale Ferris Jr.

1859–1896

Today if you want to learn about new inventions and products, you have many options. You can read magazines, watch demonstration videos online, and go to trade shows or conventions.

But before videos, people would travel to a World's Fair to discover what was new.

In 1889, Paris hosted the World's Fair. Its star attraction was the Eiffel Tower, a famous iron structure that was then the tallest man-made structure in the world—1,063 feet from ground to tip.

Before the Eiffel Tower, the Washington Monument had been the world's tallest man-made structure. But it stood only 555 feet tall. The French were winning the battle of bigger is better. (Which may be a silly contest, but we all like to be the best.)

Now the World's Fair was coming to the United States, to Chicago. The head architect told his designers to “Make no little plans,” and, overall, the plans for the Fair were coming along well. However, the Americans lacked a star attraction. They had nothing to demonstrate that they could create fantastic, colossal new creations.

Rectilinear:

made of straight lines. Most buildings are rectilinear, with straight sides and square corners.

A nation-wide contest challenged American engineers to create something “original, daring and unique.”

But the contest judges received a variety of Eiffel Tower look-alike ideas.

Then George Washington Gale Ferris Jr. proposed something original, daring, and unique.

He did not propose a standstill enormous, **rectilinear** iron tower. No—his creation would be dramatic, beautiful, round, and functional. And it would *move*.

At first, none of the judges were interested in Ferris’s plan. A giant spinning wheel, like a bicycle wheel, suspended in space? How could it possibly be safe? Although the judges weren’t interested, with the Fair set to open in just a few months, they figured they didn’t have much to lose. They wouldn’t give him any money for this crazy project, though. He’d have to work out the finances himself.

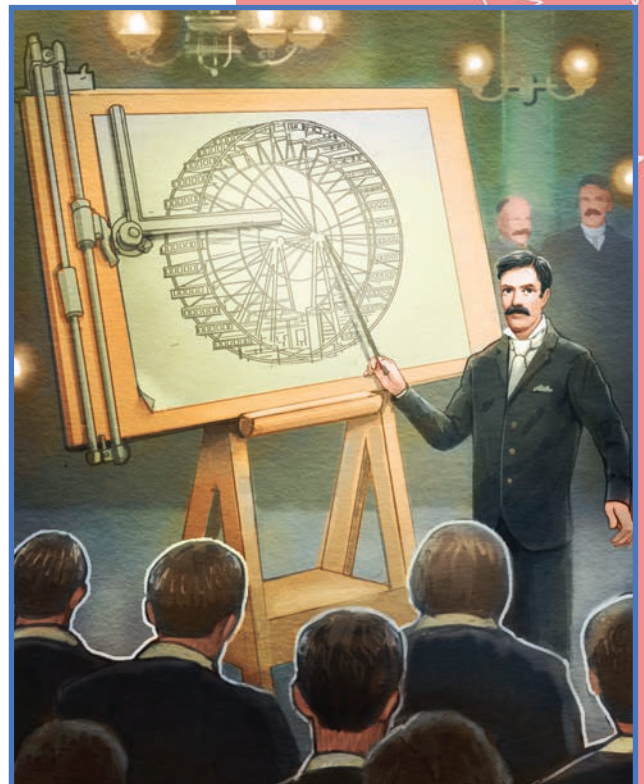
So Ferris did, and then got to work on an outsized building project. First, his team dug down 35 feet through ice and quicksand before they reached solid ground. They put in the foundation, and then built up and up.

Trains brought the 100,000 parts needed and workers fitted them together like giant Legos®.

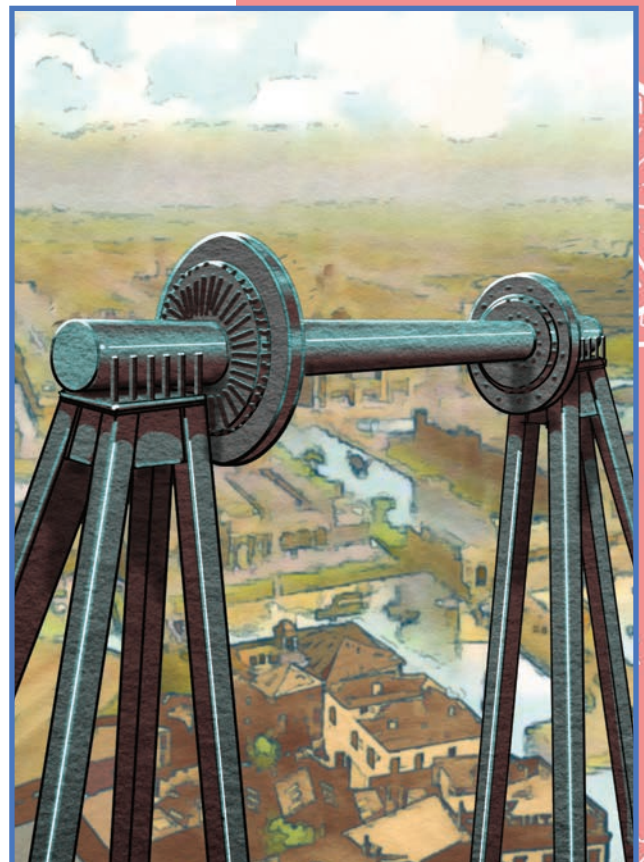
The outstanding piece was the center axle, where the wheel rotated. It was 33 inches in diameter (probably about as tall as you), and 45 1/2 feet long (maybe as long as your house).

When finished, the giant wheel stood 264 feet high—about as high as a 26 story building.

Around the edge of the wheel hung 36 passenger compartments, each the size of a



Ferris submitted an idea that looked nothing like the Eiffel Tower



The axle the wheel rotated around was 45 1/2 feet long and 33 inches in diameter



THE STATUE

The Statue of Liberty

1886



During the American Revolution, the French helped General Washington win the final big battle at Yorktown in 1783. The French Navy blocked British ships from rescuing their men, and French soldiers fought alongside Alexander Hamilton and the rest of Washington's soldiers.

Years later, a Frenchman commented that if the United States ever wanted to celebrate independence, the best monument would come from a combined effort of both the people of France and the people of America.

This idea inspired Frenchman Frederic Bartholdi, who created statues and monuments. Ninety-eight years after Yorktown, he sailed into busy New York Harbor, passing Bedloe's Island at the entrance. All ships entering the harbor sailed past Bedloe's Island. The federal government owned the island, which meant that it belonged to all of America and not just New York.

Bedloe's Island was the perfect place for his grand idea.

Bartholdi imagined a statue called, *Liberty Enlightening the World*. His Lady Liberty would lift a lamp in one hand to welcome those who came to America. In her other hand, she would hold a tablet with the date of the Declaration of Independence: July 4, 1776. At her feet would lie a broken chain, representing freedom from oppression.

The people of France would design, build, and pay for the statue; the people of America would design, build, and pay for the pedestal, the base for the statue to stand on.

This simple idea took 15 long years of hard work to bring to pass!

First of all, how could Bartholdi build the statue? It's one thing to sculpt a two foot model out of clay. It's another thing to build a 151 foot statue out of ... what material?

Bartholdi asked for advice from builder Gustave Eiffel, the famous designer who created the iconic Eiffel Tower in Paris. Eiffel suggested using iron on the inside, like a skeleton for the statue.

Bartholdi used Eiffel's suggestion and the statue has an iron skeleton. It has two spiral staircases, with 168 steps from the feet to the crown. The exterior is made of copper. The artists heated sheets of copper and hit them with wooden hammers. These sheets of copper are only about as thick as two pennies put together. For its height, the Statue of Liberty is not very heavy!

The French finished the statue in 1884, then took it all apart, loaded it in 214 crates, and transported the crates by train and ship, and sent them to America.

While the French had been working on the statue, the Americans hadn't finished the pedestal. In fact, workers had stopped because there was no money to pay them.



Bartholdi designed Lady Liberty to represent freedom



THE BOTANIST

George Washington Carver, born to enslaved parents on a Missouri farm, did not have an easy start in life. His father died around the time of his birth. A week after he was born, slavers kidnapped him and his mother Mary. The farm's owners, Susan and Moses Carver, sent out searchers, but Mary was never seen again. The searchers returned the baby to the Carvers a few days later.

Carver was small and weak but always very curious. He asked about flowers, insects, weather, everything. And he kept a garden. He figured out what insects were damaging the plants, and how to keep the plants healthy and growing—more water, less water, more sun, less sun, better drainage in the soil. He paid such close attention, that his neighbors started to ask him how to care for their plants. While still a child, he became known as “The Plant Doctor.”

Although the end of the Civil War saw the end of slavery in the United States, most schools did not allow African American children to attend. Susan Carver taught the boy to read and spell, using Noah Webster's *Elementary Spelling Book*, but he wanted to know more.

George Washington Carver

c. 1860–1943

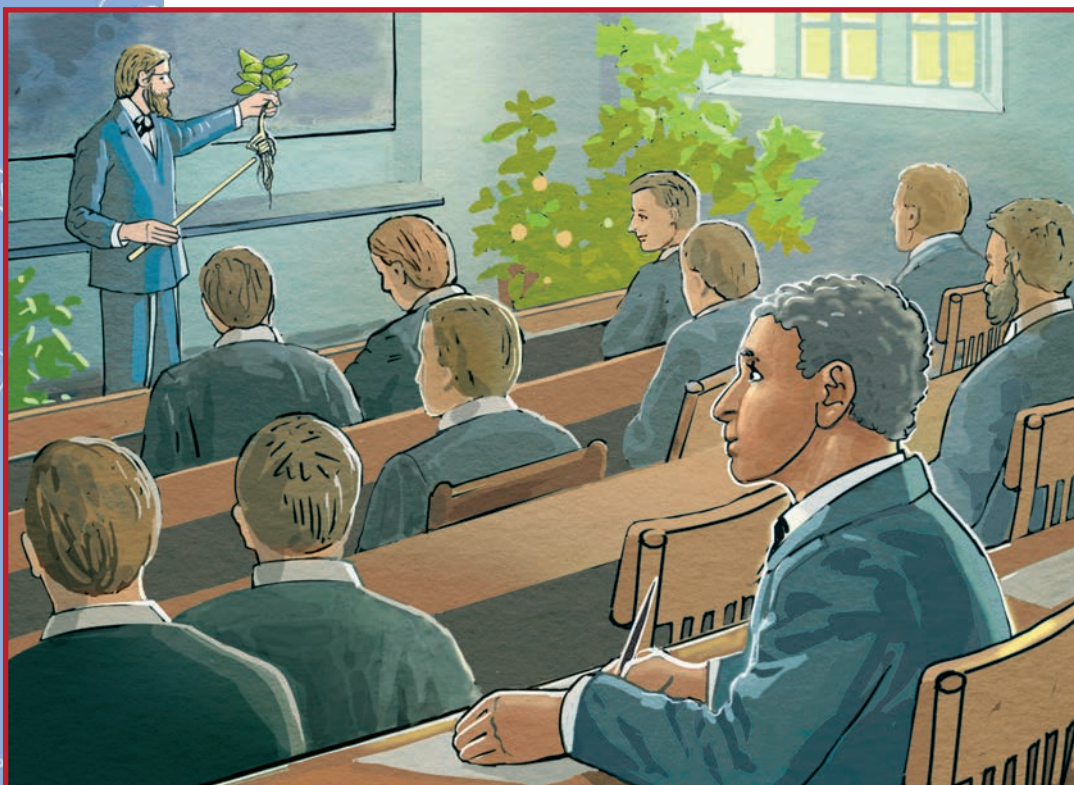
Botanist:
an expert in the
scientific study of
plants.

When he was around 10 years old, he moved to Neosho, a nearby town, so he could go to a school for African American children. He lived with a black couple, earning his keep by doing chores. When he introduced himself as “Carver’s George,” the woman of the house told him that his name should be “George Carver.”

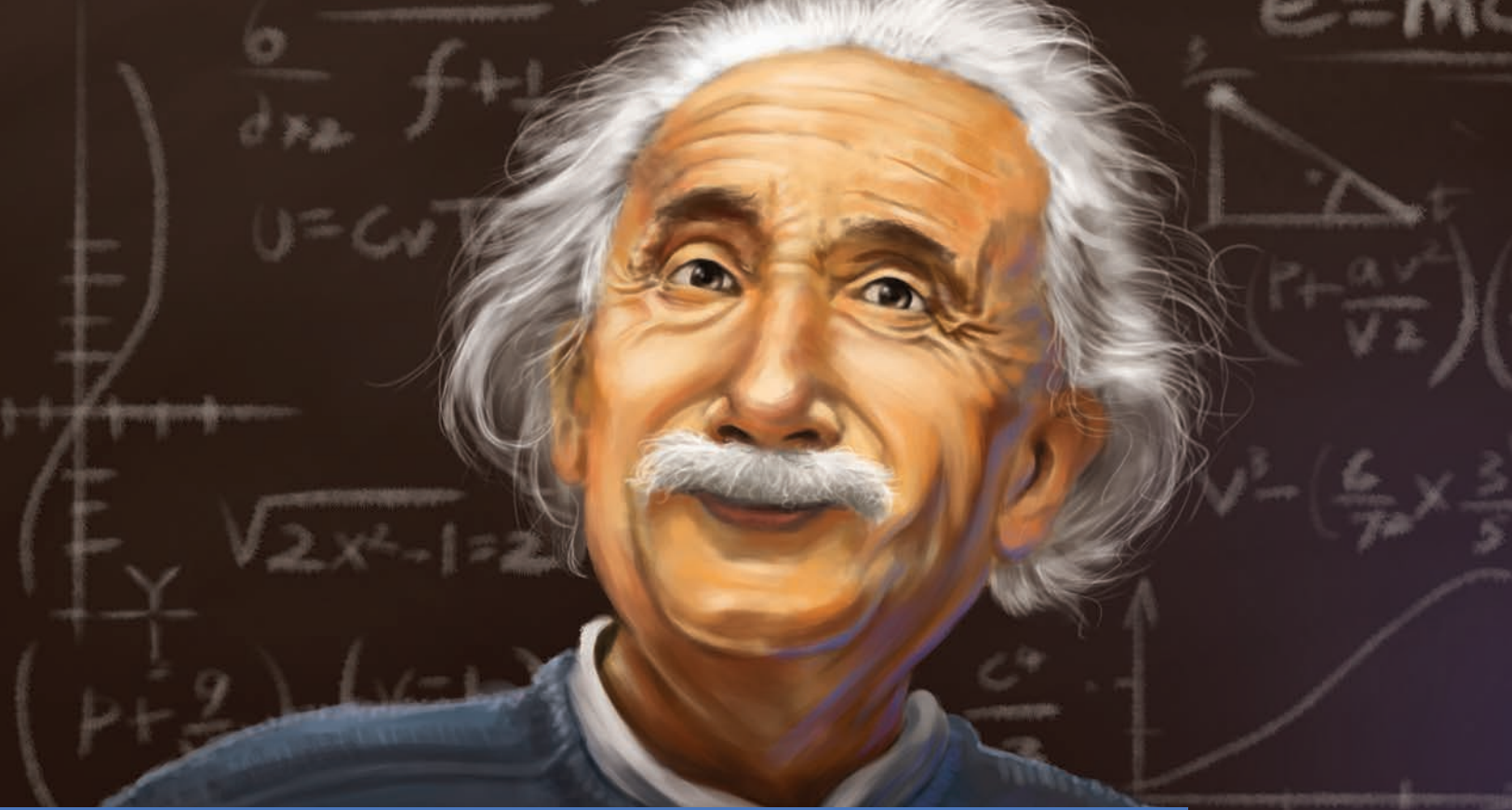
After a year in Neosho, Carver had learned all that he could there. So he left, and for several years he went to school where he could, worked where he could, and saved all he could. It wasn’t until he was around 30 years old that he was able to save enough to go to college.

Unfortunately, not many colleges would accept black students. Highland University accepted him as a student, but when he arrived, he was turned away because of his skin color.

Eventually he entered Simpson College in Iowa, as the school’s first African American student. He studied art, but then realized that he could serve the African American community better by working with plants. So even though he was a talented pianist, singer, and painter, he chose to transfer to Iowa State College and study agriculture.



Carver realized he could help his community by working with plants



THE SCIENTIST

Although most people consider Albert Einstein one of the world's greatest scientists—if not *the* greatest—in the history of the world, no one thought he was a genius when he was a boy. At birth, the back of his head was so large that his parents wondered if he had something wrong with him.

He didn't start to speak when children normally do. Most children say their first words around one year old, but some reports claim that Einstein didn't speak until age four!

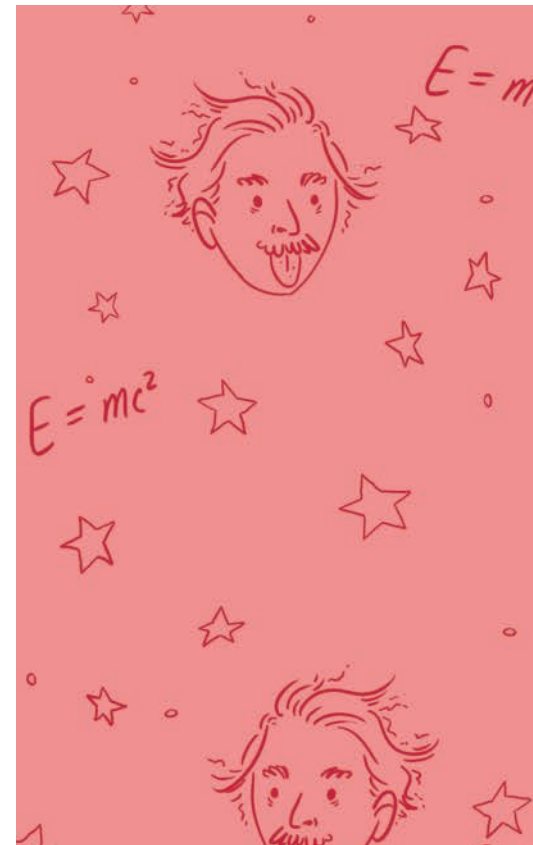
Young Einstein had a temper. He hit his younger sister on the head with a hoe (she said she needed a “sound skull” to be Einstein's sister). A tutor walked out after witnessing one of his temper tantrums.

At school, Einstein only worked hard on the school subjects that interested him. He didn't enjoy sports. Unlike the other boys, Einstein didn't like soldiers on parade. One of his teachers told Einstein he would “never get anywhere in life.”

He wouldn't have been voted “most likely to succeed”—a boy who spoke late, had a scary temper, was a bit of a loner, and

Albert Einstein

1879–1955



$$E = mc^2$$



Einstein focused on the things he enjoyed with single-minded determination

didn't bother to do all of his school work.

But when he found something he liked, he focused on it with single-minded determination.

To build a house of cards takes a steady hand and a lot of patience. Einstein built one 14 stories high.

He also puzzled things out. When he was five and sick in bed, his father gave him a **compass**. The compass made Einstein so excited he "trembled and got cold." Which, really, is probably the right response, because a compass acts as real-life magic: no matter which direction you turn the compass, the needle always points north.

COMPASS

A compass has a magnetized metal pointer that always points to the north. Why does this happen? Two magnets attract. The compass is one magnet. The second magnet is the Earth itself.





THE AVIATOR

When I was a little girl, I used to dream of flying, not with terror ... But with wonder and delight. I would be a swallow flying south, or an eagle swooping down from the clouds, and then, all of a sudden, I'd wake up, just a little girl ready to cry because she had no wings.

—Ruth Law

The Wright brothers flew a plane for the first time on December 17, 1903. Their flying craft did not resemble the safe airplanes used today, but was an open-air creation made mostly of wood and cloth.

After the Wright Brothers flew, people knew that air travel was possible. Engineers adjusted the Wright brothers' design, and pilots took to the air.

These first flimsy airplanes weren't very safe, and they couldn't go very far.

Today people go to movies for entertainment, but back then, entertainment involved real people doing real things. An airshow

Ruth Law

1887–1970

Aviator: an aircraft pilot.



entertained folks with various pilots making their planes do tricks. A pilot might do a loop-the-loop, or several planes might have an altitude competition to see who could fly the highest. Sometimes the planes crashed. The pilots didn't always survive.

Ruth Law was one of these early pilots. For four years, she delighted audiences with her air tricks, but then she sought a new challenge. She wanted to be the first to fly from Chicago to New York in one day. From the air, that is just over 714 miles.

Today, you could make the drive in about 12 hours (by road it's about 800 miles, and there's traffic). It would be a long day in the car, but you could do it. If you wanted to fly, your time in the air would be right about two hours. (You would need to add a few more hours to get to the airport, go through security, and board the plane, but it would still be faster than driving.)

But back in 1916, the roads weren't nicely paved, and no planes were available to take passengers from one city to another. Planes didn't have large gas tanks, which meant they couldn't fly very far. And pilots didn't like flying away from airports, because if the plane had trouble (and the planes often did), the pilots would have no place to land safely. It was easier to stay close to the airport. But as Law said, "To become an aviator, one has to dismiss all fear."



THE PAINTER

Pictures just come to my mind ... and I tell my heart to go ahead.

—Horace Pippin

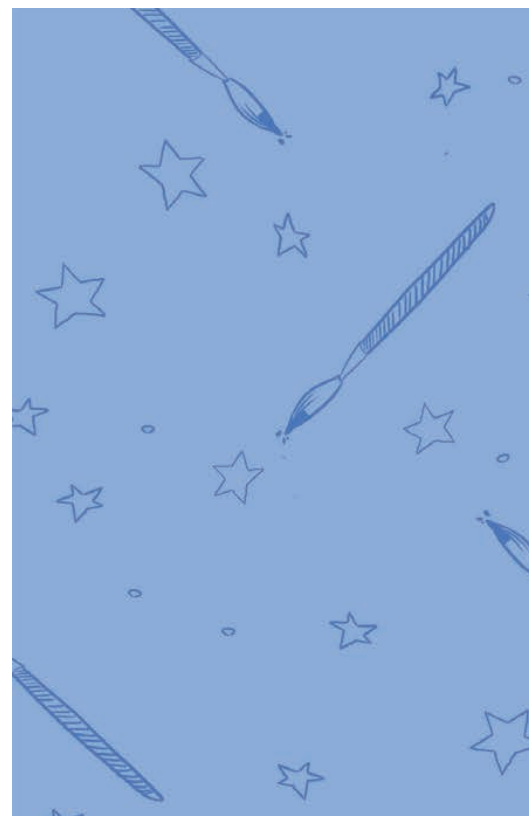
Horace Pippin shared a birthday with George Washington: February 22. He grew up drawing with a piece of charcoal, making black drawings on any scrap of paper he could find. Once he found an advertisement for an art supply company’s contest. He sent in his drawing and won colored pencils, a box of paints, and a pair of brushes. He could finally make pictures in color.

In eighth grade, Pippin’s father left the family. His mother wasn’t well, so Pippin left school to work. He carried grain at a feed store, shoveled coal for the railroad, managed luggage at a hotel, made brakes at an iron foundry, and sold used clothing.

In 1914, many European countries went to war in such a big war that they called it “The Great War.” (Later, after another big war began, people called this first big war “World War I.”) For

Horace Pippin

1888–1946



the first six months of the war, the two sides battled forward and backward, moving across many miles of land. But then the soldiers realized that if they dug trenches, the trenches would protect them. The trenches acted like a snow fort—it's hard to hit someone in a fort or a trench.

The two sides dug trenches, and then they didn't move much at all. They stayed where they were, year after year. The United States stayed out of it, year after year.

But eventually the United States joined the war, too. Pippin wanted to help, so he joined the army and went to France.

There Pippin and the other soldiers dug trenches and stayed protected. The trenches were cold, wet, and dark. Planes and explosives flew overhead. He wrote at one point, "I have not seen the sun in more than a month."

Despite all the gloom, he said, "The War brought out all the art in me." He kept a journal and illustrated it. He said "the whole entire battlefield was hell, so it was no place for any human being to be."

One day, climbing out of the trench, a sharp-shooter shot him in the shoulder.

It could have been worse—he could have been dead—but this injury permanently damaged his drawing arm.



Pippin found that war brought out his creativity, so he kept an illustrated journal in the trenches



THE CODE TALKERS

Navajo Marines

1942–1945

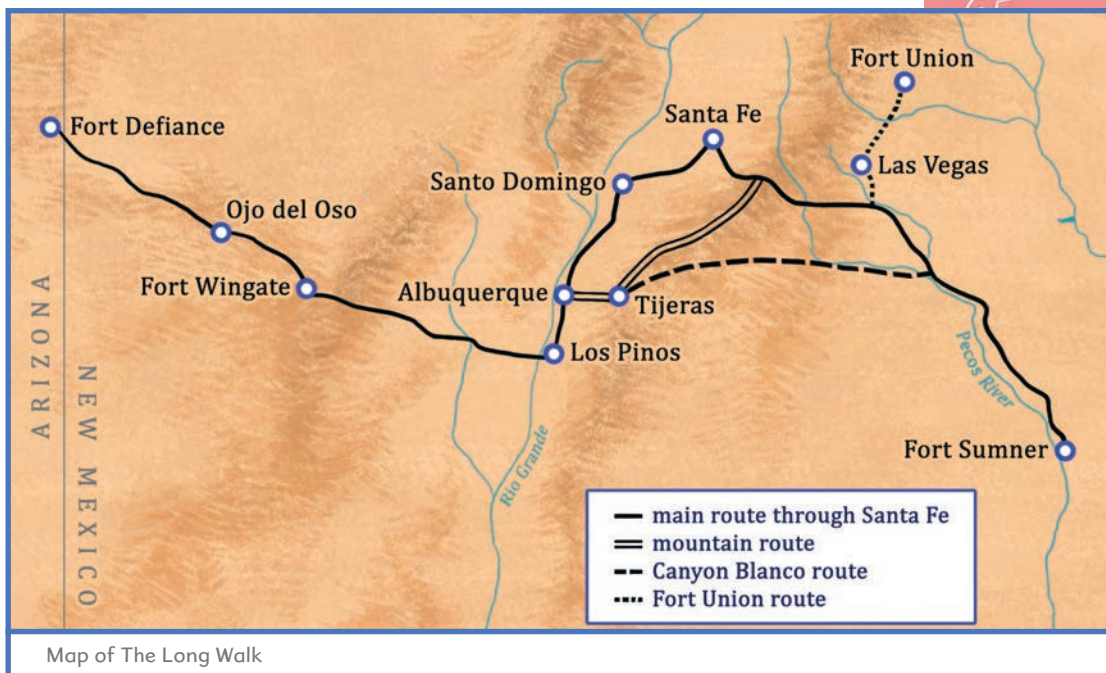


In the Western United States, four states—Utah, Arizona, Colorado, and New Mexico—touch each other. It’s a dry area, with few people; a place with wide open landscapes of enormous and beautiful mesas, like small, flat mountains that rise out of the earth.

The Navajo, or the Diné, as they call themselves, call this their homeland. These people traditionally built mud-walled, round hogans to live in, and enjoyed their extended family and small community. They grew crops, gathered food from the wilderness, raised livestock, and moved when their flocks needed new grazing land.

During the Civil War, while the Northern and Southern states were fighting, hard things happened in the West, too. Army Colonel Kit Carson swept through the Navajo land in 1863. He destroyed hogans, ruined crops, fouled wells, and stole livestock.

He rounded up about 9,000 people and forced them to walk 300 miles to Fort Sumner in New Mexico. The Navajo call this “The Long Walk,” and they remember it as part of Navajo history just



as Americans remember the Revolutionary War as part of United States history.

The Navajo survived at Fort Sumner for five years, struggling against disease and hunger, grief and outside attack.

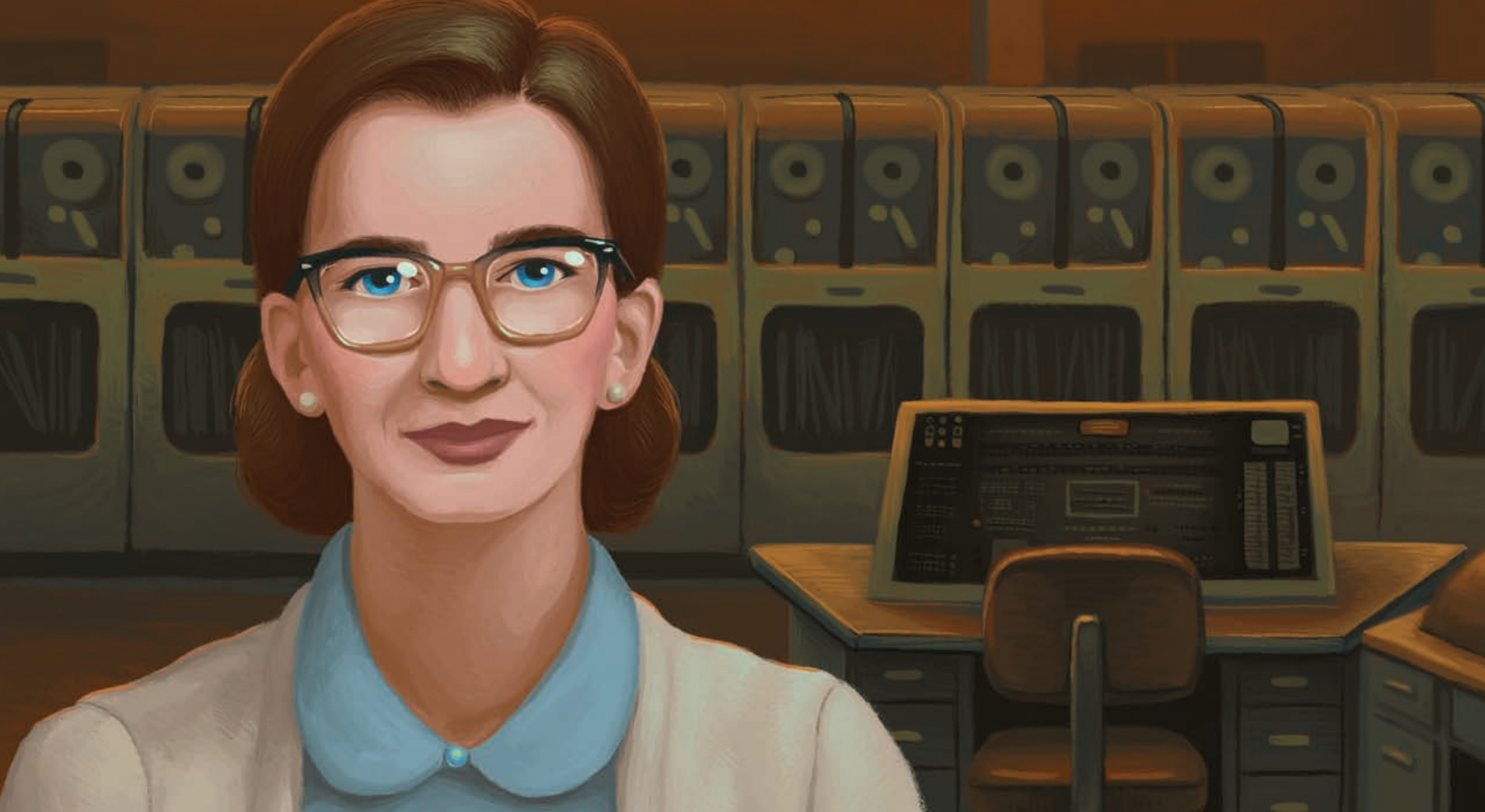
In 1868, government released the Navajo from Fort Sumner. But they couldn't return to the homes they had left. Instead, they were granted just a part of their homeland, called a "reservation." Their journey home was difficult, and when the survivors reached the reservation, it wasn't the same home they had left.

Then the government forced Navajo children to attend boarding school. The children only occasionally visited their homes and families. And the teachers tried to make the children more like European Americans and less like Navajos. Adults at the boarding school cut off the children's hair, discarded their traditional clothes, took their silver jewelry, and changed their names. Administrators forbade the use of the Navajo language. Navajo children were not allowed to speak Navajo at boarding school, not even during their free time.

After all these years of hurts and misunderstandings, the United States military sought out the Navajo.

On December 7, 1941, Japanese fighter planes attacked Pearl Harbor in **Hawaii**. This prompted the United States to join the world's second major war, called World War II.

Hawaii: a group of islands in the Pacific. Today these islands are one of the United States, but in 1941, the islands were a territory where the United States had a naval base.



THE PROGRAMMER

A ship in port is safe; but that is not what ships are built for. Sail out to sea and do new things.

—Grace Hopper

As a girl, Grace Hopper wanted to know how to make things work. At age seven, she took off the back of her alarm clock to see how the parts fit together. When the gears and springs popped out, and she couldn't figure out how to put them back together, she figured she needed another example to guide her repair job. So she took apart another clock. And another. And another.

On her seventh clock, her mother, Mary, found her.

And her mother wasn't angry! She understood that Hopper had a need to know. Since Mary had grown up in a time when women were not encouraged to learn, she wanted to support Hopper as best she could. Mary had been stopped in her mathematical studies after geometry, the study of shapes. Any mathematics beyond that wasn't considered right for ladies to learn.

Grace Hopper

1906–1992





Hopper designed a dollhouse

Architecture: the art or practice of designing and constructing buildings.

After clocks, Hopper moved on to **architecture**. She drew up blueprints for a dollhouse and then built it herself out of stone. After she finished it, she realized her dolls needed stairs or some other way to get from one floor to another. (Dollhouses sometimes skip stairs in order to have more floor space. The rooms themselves are supposed to be the pleasant spaces.)

Rather than building stairs, Hopper assembled an elevator—an elevator powered by an electric motor.

Hopper loved math and science. She graduated from high school two years early, ready to go to college and learn more. That is, until she failed Latin on her entrance exams. No college for Hopper that year! She spent the next year studying Latin, passed her exams, and headed for Vassar College.

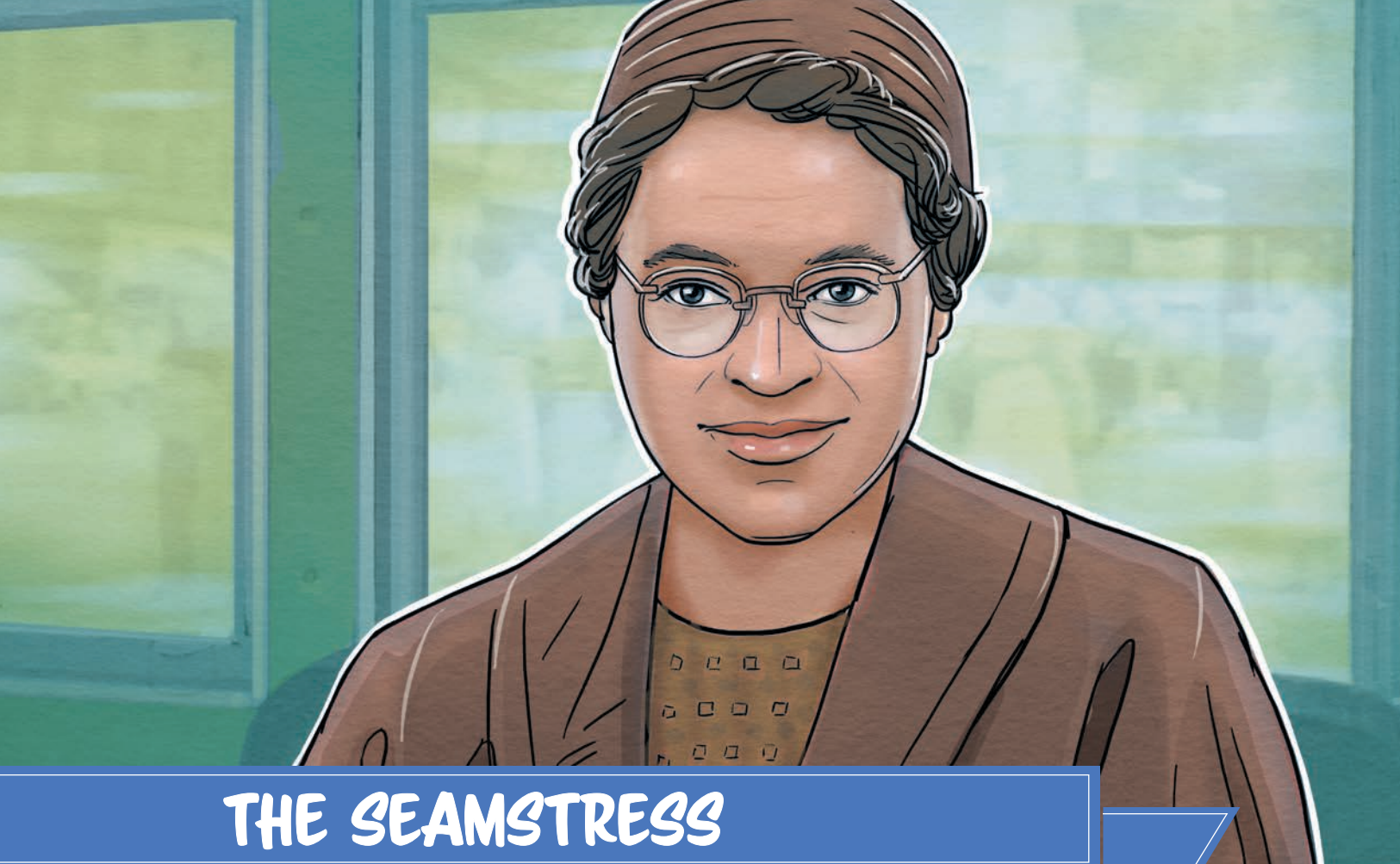
After college and graduate school, Hopper taught college students for 10 years.

Then the United States entered World War II, and the war effort needed good mathematicians to design weapons. When Hopper went to enlist, the Navy didn't want her. They thought she was too old and too skinny.

But Hopper was also persistent, and after a year, she joined the Navy's war effort. She worked on one of the first computers. There wasn't anyone to teach her programming—she had to figure it out for herself.

One day, a coworker came in with some bad news: the new computer had stopped working. The team reviewed the computer code for hours, trying to determine what had gone wrong. The code seemed just fine. Could the computer itself be the problem?

Finally someone spotted the problem—a moth had blocked a switch. After removing the insect, Hopper taped it in the logbook and wrote, "First actual case of a bug being found." (Since the last



THE SEAMSTRESS



Rosa Parks

1913–2005

I'd see the bus pass every day ... but to me, that was a way of life; we had no choice but to accept what was the custom. The bus was among the first ways I realized there was a black world and a white world.

—Rosa Parks

When Rosa Parks walked to her elementary school, she would watch the white students ride the bus to their separate school.

When Rosa Parks was 30, she boarded a city bus and paid her fare. She turned to walk to a seat, forgetting the custom that African Americans should exit the bus and board at the back. The bus driver, James Blake, told her to get out and go to the rear of the bus. When Parks got out, he drove off without her. Parks decided never to ride with him again.

When Parks was in her early forties, she attended the Highlander Folk School, where she studied strategies on how to stand up for racial equality and how to put non-violent **desegregation** into practice.



Desegregation: “segregation” separates different ethnic groups, such as having separate drinking fountains for people with light and dark skin. “Desegregation” ends this separation.



African Americans stayed off the buses for 381 days

one day. If you work, take a cab, or walk. But please, children and grown-ups, don't ride the bus at all on Monday. Please stay off the buses Monday."

Many African Americans in Montgomery did not own cars. They rode the bus in order to get to school, to get to work, to get their groceries, to shop for clothes.

But on that Monday, despite rainy weather, the African Americans stayed off the buses. As Dr. Martin Luther King Jr. said, "We will stay off the buses. We will walk until justice runs down like water and righteousness like a mighty stream."

They continued to walk. They were still walking at Christmas. And at Easter. And on the 4th of July. And at Thanksgiving. And then, five days before Christmas, after 381 days of walking in all sorts of weather, the city repealed its law requiring segregation on the buses on December 20, 1956.

Those 40,000 black commuters had wanted to be treated with courtesy, to be allowed to sit where they could find a seat. They had protested unjust treatment, and they had won.

Parks said later,

People always say that I didn't give up my seat because I was tired, but that isn't true. I was not tired physically, or no more tired than I usually was at the end of a working day. I was not old, although some people have an image of me as being old then. I was forty-two. No, the only tired I was, was tired of giving in.

Want to know more?

Read *Rosa*, by Nikki Giovanni, illustrated by Bryan Collier, a Caldecott Honor book. You might also like *Back of the Bus*, by Aaron Reynolds, which tells of Rosa's eventful bus ride from a child's point of view. *Boycott Blues*, by Andrea Davis Pinkney, retains the rhythm of the blues in telling her story.

When you're older, you'll enjoy *Freedom Walkers*, by Russell Freedman.



THE POLITICIAN

John F. Kennedy

1917–1963

About 70 years before John F. Kennedy was born, several of his great-grandparents were living in Ireland, and they had a difficult decision before them. Many farmers in Ireland ate potatoes three meals a day, but from 1846 to 1855—for 10 long years—the potatoes rotted in the fields.

Sometimes this happens with crops: a new bug arrives or a disease mutates and kills a plant. But this Irish Potato Famine was extremely bad. Without potatoes, many people would starve.

Kennedy's great-grandparents decided to act. They immigrated to America.

In 1917, Kennedy was born. All four of his grandparents were children of Irish immigrants, so he was Irish through and through.

Kennedy's family had done well in America. He could afford to go to the best schools, though he wasn't always a good student. One report said, "He is casual and disorderly ... and can seldom



Irish potato farmer in the early 1900s

locate his possessions.” When he was sick—with whooping cough, measles, and scarlet fever—he had tutors to help him continue his studies.

During World War II, he was in command of a patrol boat on the night of August 1, 1943, when the enemy suddenly rammed his boat and cut it in half. As the man in charge of 10 men in the Pacific with a sunk ship, he asked his crew whether they wanted to “fight or surrender.” He said, “There’s nothing in the book about a situation like this. A lot of you men have families and some of you have children. What do you want to do? I have nothing to lose.”

The men decided not to surrender and began a long swim to an island three miles away.

Today competitive swimmers swim that distance in practice, but they practice in swimming pools. When they want to take a break, they can put their feet down, stand up, and drink some water. These men swam in the ocean (with waves and no place to stand up), without supplies or water, in the night, with enemy boats nearby.

Kennedy injured his back in the collision, but he towed a badly burned man through the water “with a life jacket strap clenched



Even though Kennedy had injured his back in the collision, he encouraged his men to swim to safety and towed a badly burned man with him



Kennedy and his men waited for rescue

between his teeth.” The men made it to the island, but when they didn’t get help there, they moved to another island. They were finally rescued on August 8.

When asked how he became a war hero, Kennedy said, “It was easy. They cut my PT boat in half.”

After the war, Kennedy ran for the House of Representatives in 1946 and was one of the first WWII veterans to be elected. As a congressman, he had one of the 435 votes in House.

Then he ran for Senate, for one of those more powerful votes, one out of 100, and won.

Then, in 1960, he ran for president.

But Kennedy was Irish, and the Irish were generally Catholic. Catholics are supposed to listen to the Pope, the head of the Catholic Church, so Kennedy’s religion was a concern for some people. If Kennedy became president, would he let the Pope tell him what to do?

FROM THOMAS EDISON TO THE FREEDOM TREE

In these two volumes of American history, you'll enjoy a total of sixty biographies that span American history from the Viking explorers to the present day. You'll meet men and women from more than a dozen ethnic backgrounds, both larger-than-life characters and everyday people who used their gifts and abilities to improve the world.

You'll learn about trailblazers in the sciences, technology, and the arts. You'll discover famous landmarks and cultural icons, including all four of the men on Mount Rushmore. You'll get a brief overview of the Revolutionary War, the War of 1812, the Civil War, and WWI and WWII. You'll learn about the Underground Railroad and the Civil Rights movement. You'll celebrate heroes who persevered through challenges like autism, physical disability, and racism.

When you finish these two volumes, you'll know about the major people and events in American history, plus numerous other interesting topics: pandas and peanuts, baseball and birds, puppets and paintings, flight and photography, dictionaries and dance, poetry and the Pony Express, choir and computers, and so much more.

