Grade 3: What Teachers Need to Know Documents

To enhance teachers' content knowledge, *Bayou Bridges: A K–8 Social Studies Curriculum* includes What Teachers Need to Know documents for each instructional unit. Teachers should use these documents to develop their understanding of the historical context, key concepts, and background knowledge necessary to prepare effectively for instruction and support student learning.

Grade 3 What Teachers Need to Know Documents						
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About the Declaration of Independence and the American Revolution

The Buildup to the Revolutionary War

The French and Indian War

The French and Indian War in North America was part of the larger global conflict known as the Seven Years' War, in which Great Britain and France fought over colonial territory and Austria and Prussia fought over supremacy in Germany. The immediate cause of combat in North America was the encroachment of British settlers on lands claimed by the French.

The British had few Native American allies. Eventually, the Haudenosaunee (Iroquois) joined the British forces. The French were more successful in winning Native Americans to their side.

The war ended with the 1763 Treaty of Paris, which brought great changes to North America. From France, the British received all of Canada and the French territory east of the Mississippi. From Spain, the British took both East and West Florida. The Spanish, however, received Havana, Cuba, back from the British and gained New Orleans as well as the Louisiana territory west of the Mississippi from France.

That same year, Native Americans attacked along the British frontier. In response, the British government issued the Proclamation of 1763, ordering colonists to stay east of a line that ran along the Appalachian Mountains from Maine to Georgia. Angered by the law, some colonists disregarded it and moved beyond the established line.

British Taxes

In the 1600s and 1700s, European powers followed an economic policy known as mercantilism. According to mercantilism, colonies existed for the economic benefit of their home countries. For this to happen, nations had to export more to their colonies than they imported from them.

Great Britain had imposed taxes and export restrictions on the North American colonies. However, through much of the late 1600s and up until 1764, Parliament followed a policy of "salutary neglect" and did not always strictly enforce the taxes or trade laws in the colonies.

However, after 1763, in an effort to deal with its war debt, the British Parliament began enforcing and adding to its policies in its North American colonies. When Parliament passed the Sugar Act of 1764, many colonists were troubled by these changes without colonial consultation. But when the Stamp Act was passed the following year, colonial anger erupted, with the slogan "No taxation without representation" becoming a well-known exclamation. The later Townshend Acts levied more duties on colonial imports and threatened colonial self-governance. Colonists also protested these new laws. They wrote pamphlets, gave speeches, and marched in the streets. They organized into the Sons of Liberty and Daughters of Liberty and boycotted British goods.

Tensions in Boston

The British sent troops to Boston to patrol the streets and ensure that protests by colonists did not escalate into violence. The presence of these troops only increased the colonists' anger. On the night of March 5, 1770, a crowd of Bostonians was harassing a lone sentry. He called for help from nearby soldiers. The heckling intensified; snowballs packed around pieces of ice and stones were hurled at the soldiers. The frightened soldiers opened fire on the crowd. Five Bostonians were killed, and six more were wounded. Among those killed was Crispus Attucks, a sailor and former enslaved worker who was part African and part Native American. Attucks was a member of the Sons of Liberty and a ringleader of the day's heckling. The already-angry colonists called this event the Boston Massacre. After the massacre, relations between the colonists and Great Britain somewhat calmed.

The calm ended with the passage of the Tea Act of 1773. This reduced but did not eliminate the taxes on the monopolistic British East India Company. Angered by this act, colonists continued their boycott of British tea. In Boston, the Sons of Liberty, led by Samuel Adams, mobilized in protest. On December 16, 1773, a group of colonists dressed as Native Americans boarded three British cargo ships and dumped thousands of pounds of tea into Boston Harbor.

The Boston Tea Party, as it became known, resulted in retaliatory laws called the Coercive Acts (by the British) or the Intolerable Acts (by the colonists). These acts closed the port of Boston until the East India Company was paid for its losses, put the colony directly under the governance of the king, sent British troops to Massachusetts to enforce these laws (and required the colonists to pay for housing for these troops), and allowed the governor to have a soldier or an official accused of a crime tried outside Massachusetts if the governor deemed it impossible for the accused to get a fair trial within the colony.

The First Continental Congress

In 1774, a congress of all the colonies was called to discuss a response to the actions of Parliament and the king. This First Continental Congress declared the Intolerable Acts unlawful and called for

- a boycott of British goods,
- the formation of a government in Massachusetts to replace the one disbanded by the king, and
- the establishment of militias by all colonies.

In addition, the congress drafted and sent the Declaration of Rights and Grievances to King George III. This document listed the colonists' rights as English subjects and their grievances against the actions of Parliament since 1763.

The Revolutionary War

The War Begins

By 1775, the British army was firmly entrenched in Boston, and the colonists were storing guns and ammunition in outlying areas in case of trouble. General Thomas Gage, the commander of the British troops and the governor-general of Massachusetts, was determined to seize the arsenal that his spies told him was stored at nearby Concord. On the night of April 18, 1775, some seven hundred British infantry left Boston. The colonists did not know if the soldiers would cross the Charles River by boat or march the whole route overland.

Paul Revere wanted to make sure that when the British left Boston, the Patriots would know which route they were taking. He arranged for a signal in the steeple of the North Church.

When the signal indicated that the British soldiers were going to be ferried across the river, Revere, William Dawes, and Dr. William Prescott spread the word, traveling from Boston to Lexington and Concord to warn of the impending British arrival.

By 1:00 a.m. on April 19, 1775, the Minutemen—or Patriot militia—of Lexington were waiting for the British on Lexington Green. The advance party of the British saw the Minutemen and raced toward them, forming a battle line. The commander of the Minutemen told his men to disperse. In the confusion, someone fired a shot, which caused the redcoats to open fire. When the British troops finally stopped shooting, eight Americans lay dead, and ten were wounded. No one knows to this day if it was a Minuteman or a "redcoat" who fired that morning. But that shot, "the shot heard 'round the world," began the Revolutionary War.

The British re-formed into companies and continued the march to Concord. There they searched the village for weapons and gunpowder but found only a small amount. The Minutemen exchanged shots with the British on the North Bridge. In five minutes, the battle was over, and the British retreated to Boston with Minutemen firing at them all along the route.

Back in Boston, Governor-General Gage decided to fortify the city's hills before the Patriots could. On the night of June 17, 1775, the Patriots, hearing of his plans, seized both Bunker Hill and Breed's Hill. The next morning, when Gage learned of the Patriots' actions, he decided to attack. The British charged Breed's Hill, and the Americans fired at them. The British fell back, regrouped, and attacked again. By the third charge, the Americans had run out of ammunition and had to retreat; the British claimed victory but had endured heavy casualties.

The British withdrew from Boston in March 1776, after General George Washington's forces had dragged sixty cannons to the vicinity of Boston and pointed them at the British ships at Boston Harbor.

The Second Continental Congress

In May 1775, the colonies had convened the Second Continental Congress. It authorized the creation of an army and appointed George Washington as commander in chief. The colonial troops gathered around Boston were the beginnings of the Continental Army. Washington assumed command of those forces on July 3, 1775. The congress also issued the Olive Branch Petition, restating the colonists' loyalty to the king and asking for peace. King George III rejected it and issued the Proclamation of Rebellion instead, declaring the colonies in rebellion.

In January 1776, Thomas Paine published his pamphlet *Common Sense*. In it, he explained why the colonies should separate themselves from Great Britain. Drawing on the thinking of Enlightenment philosophers, Paine asserted that the colonies had a "natural right" to their own government. He also stated that the British system of government was based on tyranny. *Common Sense* greatly affected the thinking of the delegates to the Second Continental Congress.

The Declaration of Independence

On June 7, 1776, Richard Henry Lee of Virginia introduced in the Second Continental Congress a resolution calling for independence. Much of the work of writing the declaration fell to Thomas Jefferson, and on July 4, the congress approved the Declaration of Independence, declaring the thirteen colonies to be independent states.

The Declaration of Independence can be divided into sections. The preamble explains why the document has been written. The next part explains the political ideas behind the call for independence, many of which were inspired by Enlightenment philosophers. The remainder of the document lists the charges against the king and the rights that the new states were claiming for themselves.

Loyalists

The colonists were by no means united in their desire for independence. Loyalists, also known as Tories, favored reconciliation with Great Britain and continued inclusion in the British Empire. During the Revolutionary War, Loyalists often fled to British-controlled areas of North America and sometimes served as British troops. In many cases after the war, Loyalists' property was confiscated without compensation.

Many Native Americans also sided with the British. They feared that if the colonies were independent, colonists would soon move into Native American territory. As it turned out, their concerns were justified.

In the South, thousands of enslaved workers took advantage of the war and disappeared. Thousands more accepted offers to fight for the British in exchange for their freedom. Many Black people living in the Northern colonies fought for American independence.

Women in the Revolution

While the delegates did not name women in the Declaration of Independence, women worked hard for independence. The Daughters of Liberty wove cloth and sewed clothing for the Continental Army. Before the war, they had boycotted British imports, including tea and cloth. The success of these boycotts depended on the support of women, who were responsible for producing most of the household goods.

Some women made names for themselves during the years of the war: Phillis Wheatley, who had been enslaved until 1773, became known for her poetry; Sybil Ludington warned of an impending British attack; Deborah Sampson joined the Continental Army disguised as a man; and Mary Ludwig Hays McCauley—known as Molly Pitcher—provided aid to soldiers in battle.

Victory at Saratoga

Things did not go well for the Patriots in 1776 and 1777. The British had an army of well-trained and well-equipped professional soldiers, including thousands of Hessian and other German mercenaries. The Continental Army was ill-trained and ill-equipped, lacking military supplies and basic necessities such as shoes and uniforms. Prospects for the new nation looked poor—until the Battle of Saratoga, New York, in October 1777.

Soldiers of the Continental Army and local militia pinned down the British forces under General John Burgoyne. Unable to move forward or retreat, and with no reinforcements expected, Burgoyne surrendered. This victory moved the war still farther south.

European Assistance

France soon entered the war on the side of the United States, providing loans, its naval fleet, badly needed supplies, including ammunition, and later an army. A twenty-year-old French nobleman, the Marquis de Lafayette, became an important general in the Continental Army.

Help came from other countries as well. Polish military officer Thaddeus Kosciusko commanded an engineering unit at Saratoga that contributed greatly to the American victory. Prussian Baron von Steuben trained Washington's soldiers at Valley Forge. Spain and the Spanish governor of Louisiana, Bernardo de Gálvez, also provided aid, selling the Americans supplies and allowing New Orleans to be used as a base for U.S. privateers to prey on British shipping.

Valley Forge

The winter of 1777–1778 was a low point for the Americans. Washington led the Continental Army into winter quarters at Valley Forge in Pennsylvania. There, the Continental Army built log cabins and prepared for a winter with, as Lafayette put it, "neither coats, nor hats, nor shirts, nor shoes." About 2,500 of the 11,000 soldiers died that winter. However, under Washington's leadership and with training overseen by General von Steuben, the soldiers came out of their winter camp the following spring a professional army.

Cornwallis and Yorktown

By 1778, the war had moved in large part to the Southern colonies. Fighting between Patriots and Loyalists there turned into a bitter conflict. Defeat at Charleston and Camden in 1780 darkened American hopes. Then Patriot determination turned the tide with King's Mountain, Cowpens, and other stunning victories. In 1781, Lord Cornwallis, in command of British troops in the South, decided to march his army north to Yorktown in Virginia. His plan was to set up operations where the British navy could easily supply his forces.

But Cornwallis underestimated the American and French forces. The French fleet won control of the Chesapeake from the British, cutting off Cornwallis's supply and escape route. Meanwhile, Washington and the French general Comte de Rochambeau moved their combined forces south. Lafayette's troops, reinforced by soldiers from the French fleet, moved on Yorktown. Surrounded and outnumbered, Cornwallis asked for terms of surrender. When the British garrison marched out, tradition holds that their band played "The World Turned Upside Down."

Symbols of America

A symbol is something that represents something else. The United States is known around the world by several key symbols, the most recognizable of which is probably the American flag, which was approved by the Continental Congress on June 14, 1777. Today, it remains a symbol of freedom, national pride, and individuals coming together as one nation.

Although it has gone through many iterations over the years, by law the flag must have thirteen alternating red and white stripes and a navy blue square in the upper-left corner that provides a backdrop for a field of stars. The number of stripes represents the number of American colonies in 1776. The stars represent the number of states in the Union.

Buildings can also be symbols. The White House is the home of the president and the president's family. They generally reside in the upper levels of the six-story building. The president and the presidential staff work in the lower levels, especially the Oval Office. Every president since John Adams, second president of the United States, has resided in the White House, which was completed in the first years of the 1800s and rebuilt after the War of 1812. The White House is one of the oldest federal buildings in Washington, D.C., and one of the most recognizable homes in the world. Sometimes called "the People's House," it is also a symbol of democracy.

The U.S. Capitol building is another easily recognizable symbol of the United States and its federal government. Located in the geometric center of and on one of the highest elevations in the city, the Capitol can be seen from nearly everywhere in Washington, D.C. It is the home of Congress, the legislative branch of the federal government. The House of Representatives occupies the north wing—on the left when viewed from the National Mall—and the Senate occupies the south wing. Visitors can watch House and Senate debates from galleries at the top of each chamber. In addition to the legislative chambers, offices, press rooms, and workspaces, the Capitol building also has several art and history exhibits for public viewing. The building and the legislators within it have withstood the nation's most difficult times, from a British assault during the War of 1812 to the attack of January 6, 2021. Still, the Capitol stands as a reminder of the voice of the people and the power it holds.

About the Constitutional Convention

From the Declaration to the Constitution

The Articles of Confederation

During the Revolutionary War, the Continental Congress wrote and adopted the Articles of Confederation as the framework for the new nation. After the war, the new United States continued to operate under this document. However, the Articles of Confederation had a number of shortcomings. It established no executive department to coordinate the actions of the states or to act for the nation as a whole, for example, in dealing with foreign nations. Congress held both legislative and executive powers yet had no powers of taxation, making it dependent on the states for all revenue. The Articles of Confederation's flaws were made clear by a series of events in the early years of the new republic, including Shays's Rebellion, which the federal government struggled to handle.

James Madison's Role in the Constitutional Convention

When it became clear that the government was not working, a convention was called to revise the Articles of Confederation. Instead of merely revising, however, the delegates wrote a new constitution—the one under which Americans live today. James Madison was a pivotal figure in those proceedings. His thinking is represented in several of the key ideas of the Constitution, such as the need for a strong national government, the basing of representation on population (as in the House of Representatives), and the federal system itself. Madison's notes are the primary record we have of the proceedings and debates.

Once the Constitution was passed by the convention, Madison wrote *The Federalist Papers* with Alexander Hamilton and John Jay, arguing in favor of ratification of the Constitution by the states. After the Constitution was ratified by enough states and the new government established, Madison submitted a proposal for a bill of rights, which Congress debated, revised, adopted, and sent to the states for ratification.

Compromises at the Constitutional Convention

The U.S. Constitution was the result of heated debate among men with differing viewpoints who represented different parts of the country with sometimes competing and conflicting interests.

Part of that heated debate involved representation in the new government. In addition to their proposals for strengthening the federal government, the Virginia delegation proposed a bicameral legislative branch made up of a House of Representatives and a Senate. Representation in both would be based on population. However, the smaller states were concerned that their interests would be

ignored under such an arrangement. In response, New Jersey delegates proposed that each state be given one vote in each house.

In the end, the convention rejected both plans in favor of a plan by the Connecticut delegation. The Connecticut Compromise, also called the Great Compromise, called for representation in the House of Representatives to be based on population, whereas in the Senate, each state would have two representatives, called senators. Representation in Congress continues to be based on this plan.

A second, equally volatile debate was related to slavery: What should be done about slavery? If it continued, should enslaved people be included in the population of each state, thereby increasing the number of representatives for the states that had enslaved people living within their borders? Antislavery sentiment was rising in Northern states and in some parts of Virginia and Maryland. A few Northern states had already abolished slavery, and many more would do so in the coming years. However, many Southern states depended on slave labor, and these states were not willing to abolish slavery.

Southern states wanted the enslaved to be counted, whereas Northern states did not, although they did favor counting enslaved persons for tax purposes (which Southern states opposed). Northern states finally agreed to a compromise that allowed Southern states to count every five enslaved persons as three free persons, for purposes of representation and taxation. This is known as the Three-Fifths Compromise.

The convention included ten other provisions regarding slavery, including a stipulation that Congress would not attempt to end the importation of enslaved persons before 1808. These provisions effectively left the issue of slavery unresolved.

The Constitution of the United States

The United States has one of the oldest written constitutions in the world. One of the reasons for its success is its adaptability. Its designers built an amendment process into the document. Twenty-seven amendments have been added since ratification, yet the Constitution remains remarkably similar to what it was in 1789.

There are five basic principles on which the Constitution rests:

- popular sovereignty
- federalism
- separation of powers
- checks and balances
- limited government

Popular Sovereignty

The Constitution begins with a preamble that explains the purpose of the document and establishes the government on the principle of the consent (agreement) of the governed. “We the people of the United States” are establishing the government and agree to live under its laws. This principle is known as popular sovereignty.

Federalism

The framers of the Constitution devised a federal form of government, in which power is divided between the federal government and the states. All powers not listed in clauses 1–17 are reserved to the states, which may pass some of them on to local governments serving counties, cities, townships, and special-purpose districts. The Tenth Amendment further states that all powers that do not rest with the federal government, "nor [are] prohibited by it [the Constitution] to the states, are reserved to the states respectively, or to the people."

Separation of Powers

Another fundamental principle of the Constitution is the separation of powers among the three branches of the federal government. The first three articles of the Constitution describe the branches of government. Article I describes the legislative branch, Article II the presidency and the executive branch, and Article III the judiciary. Article I also names the powers of the federal government; these are known as enumerated, or listed, powers.

The Legislative Branch

The legislative branch has the responsibility to make laws. The legislative banch, or Congress, is divided into two houses: the House of Representatives and the Senate. The current House has 435 members, each elected for two-year terms. The total number of representatives is based on legislation, and the number per state is proportionally based on each state's population in the latest national census. The Senate has one hundred members, two from each state, each elected for six-year terms.

The Executive Branch

The president heads the executive branch, which oversees the implementation of laws. Second to the president is the vice president. Both are elected by a small group of people who are individually referred to as "presidential electors" and collectively referred to as the "electoral college." In the electoral college, each state has one vote for each member of its congressional (Senate and House) delegations, making for a national total of 538 votes today. Voters in each state vote for electors pledged to presidential and vice presidential candidates. After the election, the electors cast their votes. Sometimes, as in 2016 (Clinton vs. Trump), 2000 (Bush vs. Gore), and 1876 (Hayes vs. Tilden), the presidential candidate who wins the popular vote loses the electoral college vote.

At the next level of the executive branch are the heads of the fifteen executive departments. These department heads make up the president's cabinet. The cabinet departments and their agencies, as well as government corporations, commissions, and regulatory agencies, are charged with seeing that the laws are implemented.

The Judicial Branch

The federal judiciary is headed by the U.S. Supreme Court. Today, there are nine justices on the court, and the head of the court is called the chief justice. All Supreme Court justices and most lower federal court judges are appointed for life. The Supreme Court determines the constitutionality of both federal and state laws. The Supreme Court does not usually try any original cases, or cases that are not being appealed. The few exceptions have been cases against a state or several states, or against officials of foreign countries. In choosing the cases that the Supreme Court hears, the justices only take cases whose outcome could overturn a law as unconstitutional, affirm a law that has been questioned, or fine-tune a law.

The main lower federal courts are the district courts, which are trial courts, and the courts of appeal. These courts deal with about one percent of all the court cases heard in the United States annually. Federal courts hear only those cases that deal with breaking federal laws.

Checks and Balances

The powers of each branch are designed to limit the powers of the other two. This is called checks and balances, which include the following powers and responsibilities:

Executive branch	Legislative branch	Judicial branch
• The president must provide an annual State of the Union report to Congress. • The president must submit nominees for the Supreme Court and certain other federal positions to the Senate for approval. • The president must submit a federal budget for congressional approval. • The president may veto a bill passed by Congress.	• Congress approves all finance legislation. • The House can impeach a president for wrongdoing in office. • The Senate tries an impeached president. • With enough votes, both houses of Congress may override a president's veto. • The Senate approves treaties and presidential nominations.	• The Supreme Court reviews legislative and executive actions. • The chief justice presides at a president's impeachment trial.

Limited Government and The Bill of Rights

The first ten amendments to the Constitution are known as the Bill of Rights. These amendments guarantee certain basic rights by limiting governmental power.

Amendment	Right(s)	Meaning
First	Freedoms of religion, speech, press, assembly, and petition	The government may not establish an official religion or keep people from practicing their faith. The government may not punish people for expressing opinions in speech or print (except in cases of libel and slander) and cannot keep people from holding peaceful meetings or calling for an end to injustices.
Second	Right to bear arms	"A well regulated Militia, being necessary to the security of a free State, the right of the people to keep and bear Arms, shall not be infringed."
Third	Limits on quartering (housing) troops	"No soldier shall, in time of peace, be quartered in any house, without the consent of the Owner, nor in time of war, but in a manner to be prescribed by law."
Fourth	Protection against unlawful search and seizure	The government must get a warrant from a judge to search and/or seize a person and/or goods. The warrant application must show why the action is legal and necessary.
Fifth	Due process: rights of the accused in criminal proceedings	A person accused of a crime has rights, including the presentation of evidence to a grand jury to determine whether there is enough evidence for a trial.
Sixth	Rights of the defendant in a criminal prosecution	A defendant has rights to speedy and fair trial, to be told the charges against them, to have witnesses testify on their behalf, and to have at least one attorney.
Seventh	Rights in a civil suit	In a civil lawsuit for damages, either party may request a jury trial, and it must be granted.
Eighth	Protection against excessive or cruel and unusual punishment	Neither excessively high bail or fines nor cruel and unusual punishment may be imposed.
Ninth	Non-enumerated rights	The people have rights that are not listed in the Constitution.
Tenth	Powers reserved to the states or people	Powers not named in the Constitution as being given to the federal government belong to the states or the people.

About the First President

President Washington

General George Washington

Born into a well-to-do family in Virginia, George Washington grew up without his deceased father and became a land surveyor by profession. He served as an officer on the western frontier during the early days of the French and Indian War and was commander in chief of all Virginia troops from 1755 to 1758. From 1759 to 1774, he was a member of the Virginia House of Burgesses. His fellow Virginians selected him as a delegate to the First Continental Congress, and the Second Continental Congress chose him to command the Continental Army. Washington had to turn a corps of untrained or poorly trained volunteers and militia into an army capable of fighting the professional soldiers of the British army. One of his major problems was getting funds from the cash-strapped new government for food, guns, and supplies such as blankets and shoes for his soldiers. Washington eventually guided the army to victory.

Washington's Election

Under the Articles of Confederation, the government faced many problems. There was no executive branch to enforce the laws of Congress or to force states to comply with its acts. One of the reasons that the delegates to the Constitutional Convention agreed to the creation of an executive department and the position of president was because they believed that Washington would be the first president. Having won the war, Washington was very popular with both veterans and the general populace. It was expected that his honesty, quiet determination, personal dignity, sense of responsibility, good judgment, and basically cautious approach would serve the nation well as it created itself.

After the Constitution was ratified by the ninth state, it became the official law of the land. The electors met in their state capitals in January and February 1789 to choose the first president. There were 69 electors in this first presidential election, each of whom was allowed to cast two votes, one of which had to be for a candidate who was not from the elector's home state. Remarkably, all 69 electors voted for George Washington, who was therefore unanimously chosen to become the first president. John Adams was runner-up, with 34 votes, so he became the first vice president.

The voting procedure used in this first election was different from the procedure used today. The Constitution, in Article II, Section 1, allowed state legislatures to appoint electors in whatever manner they chose. The Twelfth Amendment to the Constitution was ratified in 1804, providing for the electoral college as it now functions. It then became the norm for candidates for president and vice president to run for office "together," since electors could now cast separate votes for the office of president and the office of vice president.

The First Presidency

Upon taking office, Washington found himself in a vast void: he and his vice president composed the entire executive branch of what was meant to be a strong federal government with grave powers and responsibilities (Constitution, Article II, Section 2), in a country that was only just returning to "normal" after a war with its largest trading partner and had heavy debts from that war. His wisdom led him to recognize the value of expert, intelligent, and honest advisors, whom he appointed to head the departments he devised. These advisors made up his cabinet, which he also invented. Among his advisors he deliberately included two men who had strongly opposing views—Secretary of the Treasury Alexander Hamilton and Secretary of State Thomas Jefferson.

Hamilton believed that the nation needed to focus on repaying war debts by imposing an import duty on goods being brought into the nation for sale. He and the Federalists saw the future of the nation as being built on a strong, centralized government that increasingly concentrated on industry and commerce.

The opposing view, held by Thomas Jefferson and the Anti-Federalists, was that the United States should continue as a nation of small farmers, with a weaker central government that respected states' rights. By the time Washington left office, the two opposing views had become the basis for opposing political parties, which Washington cautioned against but was unable to prevent.

During his term in office, Washington set certain precedents that remain in effect today. Among them are that the president:

- serve a maximum of two terms in office (after Franklin Roosevelt broke this precedent in the 1940s, Congress and the states added the Twenty-Second Amendment to make it law);
- be advised by a group of experienced counselors (the cabinet); and
- have a place in formulating and urging the passage of legislation.

The Vice President and the Cabinet

John Adams, Vice President

John Adams was vice president for both Washington's first and second terms as president. When Washington declined to run in 1796, he supported Adams as his successor. The election of 1796 was the first to have established political parties. Adams ran as a Federalist and received the most votes, so he became president. Thomas Jefferson, the leader of the Democratic-Republicans, received the next highest number of votes after Adams and so became vice president. With the election of John Adams to the presidency as Washington's successor, another important precedent was set: the peaceful transfer of power from one president to another.

Thomas Jefferson, Secretary of State

Thomas Jefferson served as secretary of state under George Washington. In 1800, he beat John Adams during Adams's reelection bid for president. Jefferson served for two terms and was the first president to be inaugurated in Washington, D.C.

Jefferson had lifelong interests in science, philosophy, and the arts, as well as in architecture. He designed his own home, Monticello, one of the earliest examples of neoclassical architecture in the United States. Jefferson owned more than 6,500 books on almost every subject imaginable, including religion and philosophy. His book collection became the start of the collection of the Library of Congress.

Alexander Hamilton, Secretary of Treasury

Alexander Hamilton served in the Revolutionary War first as a soldier, then as George Washington's assistant and adviser. He was later a member of the Confederation Congress (the lawmaking body created by the Articles of Confederation). A proponent of a strong central government, he was the principal writer of *The Federalist Papers* that supported the ratification of the new Constitution. He alone was responsible for writing 51 of *The Federalist Papers'* 85 essays.

Never one to do anything by halves, Hamilton yet again made waves as secretary of the treasury. The nation was deeply in debt after the Revolutionary War. Hamilton's solutions—paying federal war bonds, having the federal government assume states' debts, and federal tax collection—had some states in an uproar until he and James Madison worked out a compromise about the location of the country's new capital, which would move from Hamilton's New York City to Washington, D.C., as a result. Additionally, it was Hamilton's proposal to levy an excise tax on distilled spirits, which provided many small farmers in western Pennsylvania with their income, that led to Congress passing the nation's first internal revenue tax in 1791—and eventually the Whiskey Rebellion. Many farmers were arrested during the rebellion, but most were released. The two convicted for treason were eventually pardoned.

Henry Knox, Secretary of War

Henry Knox was a trusted friend of Washington's both during the Revolutionary War and during Washington's presidency. Knox, a former bookshop owner, was a self-taught student of military history and quickly proved that his studies translated into field leadership and strategic acumen. By 1776, Washington had promoted Knox to chief of the Continental Army artillery.

As secretary of war, Knox established the plans for a national militia and its training that were followed for the next 150 years. Knox also quelled domestic uprisings, including Shays's Rebellion in 1787. He, like Hamilton and Adams, was a Federalist, leaving Jefferson and Randolph to oppose them.

Edmund Randolph, Attorney General

Washington's cabinet also included the less well-known Edmund Randolph, the nation's first attorney general. Randolph had been Washington's aide-de-camp for a time during the American Revolution. He further made a name for himself when he presented the Virginia Plan during the Constitutional Convention, and he eventually played a key role in Virginia's ratification of the final document.

Randolph had long acted as Washington's personal legal adviser and transitioned into his new role of the executive department's chief legal adviser in 1789. Randolph succeeded Thomas Jefferson as secretary of state in 1794.

About How the United States Government Works

The Constitution of the United States

The United States has a constitutional government—that is, one in which the law limits what government can do. The Constitution is the highest law in the land and is one of the oldest written constitutions in the world. No actions of either the legislative or executive branches may violate the Constitution. The judicial branch determines the constitutionality of their actions, laws, executive orders, regulations, and so on.

There are five basic principles on which the Constitution rests:

1. popular sovereignty: the will of the people
2. federalism: the division of power among national and state governments
3. separation of powers among executive, legislative, and judicial branches
4. checks and balances among the three branches of government
5. limited government: the curtailment of the powers of federal and state governments

Three Branches of Government

After the Preamble, the next three articles of the Constitution describe the three branches of government. Article I describes the powers of the legislative branch, Article II the powers of the president and the executive branch, and Article III the powers of the judiciary.

The Framers of the Constitution devised a federal form of government, in which power is divided between the national, or federal, government and the states. Article I, Section 8, Clauses 1–17 enumerate the powers of the federal government; these are known as enumerated, or listed, powers. Additionally, Clause 18 of Section 8 gives Congress the power to enact laws that allow it to carry out its enumerated powers. It is alternately known as the Elastic Clause. This clause has been used to greatly expand the power of Congress beyond just those powers listed in Clauses 1–17.

Limits on Federal Power

All powers not listed in Clauses 1–17 are reserved to the states, which may pass some of them on to local governments serving counties, cities, townships, and special-purpose districts. The Tenth Amendment further states that all powers that do not rest with the federal government "nor [are] prohibited by it [the Constitution] to the states, are reserved to the states respectively, or to the people."

Separation of Powers

A second fundamental principle of the federal government as outlined by the Constitution is the separation of powers among the three branches of government: legislative, executive, and judicial. Article I lists the powers of Congress, Article II lists the powers of the president, and Article III provides a sketch of the judicial branch. Legislation to create a federal court structure along with judicial decisions have both had a role in determining the size and role of the federal judiciary.

The powers of each branch limit the powers of the other two, acting as a system of checks and balances.

Legislative Branch

The legislative branch, Congress, is divided into two houses: the House of Representatives and the Senate. The current House has 435 members. The total number of representatives was determined by a law passed in 1929, and the number per state is based on a proportion worked out from each state's population once every ten years, after the decennial national census. Members of the House are elected for two-year terms. The Senate has one hundred members, two from each state. Senators are elected for six-year terms.

In general, Congress develops and passes laws governing federal income tax rates, overseeing securities (stocks and bonds), regulating trade with foreign nations, and managing the environment. The House has the sole power to initiate revenue bills; the Senate must approve the bills. The Senate has the sole authority to confirm or reject foreign treaties negotiated by the executive branch. It likewise has the power to confirm or reject presidential nominees such as ambassadors to other countries and judges for the federal judiciary, including the Supreme Court. The Constitution gives Congress the sole power to declare war.

Executive Branch

The president heads the executive branch of government. Second to the president is the vice president. Both are elected by the Electoral College.

In the Electoral College, each state has one vote for each member of its congressional (Senate and House) delegations, making for a national total of 535 votes today. Voters in each state vote for electors pledged to their preferred presidential and vice-presidential candidates. The electors then meet after the election to cast their votes. This is how in the 2016 (Trump vs. Clinton), 2000 (Bush vs. Gore), and 1876 (Hayes vs. Tilden) elections, the candidate with the majority of the popular vote lost; in each case that candidate failed to win a majority in the Electoral College.

At the next level of the executive branch are the secretaries, or heads, of the fifteen executive departments (although the head of the Justice Department's official title is attorney general, not secretary). These people, along with the vice president, make up the president's cabinet. They are appointed by the president and serve "at the pleasure of the president." However, the Senate must approve the appointments of the secretaries, an example of checks and balances in operation.

There are some four thousand top-level managers within the cabinet departments and in regulatory agencies, government corporations, and commissions. The president, with the approval of the Senate, appoints them as well. These are non–civil service jobs, so the appointees do not take civil service examinations, and they also serve "at the pleasure of the president." An example of a regulatory

agency is the Securities and Exchange Commission. Amtrak, the federally subsidized passenger railroad company, is an example of a federal corporation. One commission is the Civil Rights Commission.

In all, more than 2.7 million people work for the federal government, not including members of the military or employees of Congress or the federal judiciary. These are career employees who are covered by the provisions of the civil service law.

The president oversees the executive branch, whose job is to see that the laws passed by Congress are carried out. The cabinet departments and their agencies, as well as government corporations, commissions, and regulatory agencies, are charged with seeing that the laws are enforced.

In addition to overseeing the executive branch and enforcing the laws of the country, the president has a number of other responsibilities. One of these is to sign bills passed by Congress into law. The president may also issue executive orders and grant pardons. Further, the president acts as head of government and commander-in-chief of the armed forces. And as head of state, the president represents the United States abroad and has the power to negotiate treaties with other countries.

Judicial Branch

The federal judiciary is headed by the U.S. Supreme Court. There are nine justices on the Court, and the head of the Court is called the chief justice. All Supreme Court justices and most lower federal court judges are appointed for life. (There are a few exceptions to the life-tenure policy.)

The Supreme Court determines the constitutionality of laws. Federal laws or state laws may come before the Supreme Court on appeal. The Supreme Court does not usually try any original cases—that is, cases that have not been heard by a lower court and sent through the appeals system. The few exceptions have to do with cases against a state or several states and against officials of foreign countries. In choosing the cases that the Supreme Court hears, the justices take only a case in which the outcome could affect a law by overturning it as unconstitutional, by affirming a law that had been questioned, or by fine-tuning a law in some way.

The federal judiciary, the next level below the Supreme Court, deals with about one percent of all the court cases heard in the United States annually. Federal courts hear only those cases that deal with breaking federal laws, such as laws against drug possession and sale, firearms violations, corporate tax fraud, and corporate polluters.

Checks and Balances

The Senate's authority to accept or reject presidential nominees and foreign treaties is an example of the checks and balances system that the Framers wrote into the Constitution. The Framers were concerned about giving the federal government too much power, so they devised a system in which the three branches would limit one another's power. The checks and balances are as follows:

The president

- must provide an annual State of the Union report to Congress
- must submit nominees for certain federal positions to the Senate for approval (for example, cabinet secretaries and federal court judges)

- must submit a federal budget for congressional approval
- may veto a bill passed by Congress

Congress

- The House can impeach a president or federal judge for wrongdoing in office.
- The Senate tries an impeached president.
- With enough votes, both houses may together override a president's veto.
- The Senate approves treaties and presidential appointments.
- Congress initiates all finance legislation.

Judicial branch

- This branch reviews legislative and executive actions.
- The chief justice of the Supreme Court presides at an impeachment trial.

How a Bill Becomes a Law

Congress's primary responsibility is to pass laws for the country. This process begins when a bill, or a piece of proposed legislation, is introduced in the House of Representatives or in the Senate. A bill must be sponsored by a representative or a senator in addition to the legislator who wrote it. Once the bill is introduced, it is assigned a number and sent to a relevant committee for review. Committee members may request additional information or expert opinion, in which case the bill is sent to a subcommittee for closer review.

Bills approved in committee are sent back to the Senate or House floor for a vote. If the bill successfully passes, it is sent to the other house of Congress, where it proceeds through another committee for review. It is not uncommon for the bill to undergo changes at this point. If the second house passes an amended bill, it is sent back to its house of origin. Members of the House and Senate then negotiate so that both houses pass the same bill.

If a majority of the House and Senate pass the bill, it is then sent to the president. If the president agrees with the bill, he or she will sign it into law. If the president disagrees with a bill that Congress has passed, he or she may veto, or reject, it. The president can do this in one of two ways.

1. If Congress will be in session for more than ten days, the president returns the bill, explaining why he or she is not signing it.
2. If Congress will adjourn within ten days of the president's receipt of the bill, the president does nothing. This is known as a pocket veto.

To override a president's veto, both the House and the Senate must reconsider the bill, and at least two-thirds of each chamber's members must vote for it. Pocket vetoes cannot be overridden. Those vetoed bills must go through the process of congressional and presidential approval once again.

How People Can Participate in Government

People may participate in government in a number of ways. The most basic way is to be an informed citizen and vote in all local, state, and national elections. Paying taxes, serving on juries, and obeying constitutional laws are other ways that a person exercises the responsibilities of citizenship.

Other ways to participate in government are to volunteer in the campaigns of candidates for public office or to become a candidate. There are also many different kinds of jobs in government service, from the traditional, such as a law enforcement officer, to the unusual, such as an urban archaeologist working for the National Park Service.

Citizenship

U.S. citizenship is acquired in one of two ways: through birth or through naturalization. Any person born in the United States is automatically given U.S. citizenship. This also applies to people born off U.S. soil to a parent with U.S. citizenship.

The naturalization process includes several requirements, some of which vary based on individual circumstances. Generally, applicants must be at least eighteen years old and have legally resided in the United States for a minimum of five years. Applicants are required to speak and write English and demonstrate understanding of U.S. history and government on an exam. After successfully completing the application process, candidates are administered the Oath of Allegiance to the United States.

About Geography and Symbols of the United States

Location

Western Hemisphere

Because Earth is round, it cannot be seen completely at any one time. Even an astronaut in space can see only half the world at once. One half of the world is called a hemisphere, meaning half of a sphere, or ball. The northern part of Earth is called the Northern Hemisphere, and the southern part is called the Southern Hemisphere. But Earth can also be looked at as having a Western Hemisphere and an Eastern Hemisphere. Every continent is in at least two hemispheres at once. For example, North America is in the Northern Hemisphere and the Western Hemisphere.

Around Earth is an imaginary line called the equator. It is halfway between the North and South Poles. This is the line where the Northern and Southern Hemispheres divide. The dividing lines for the Eastern and Western Hemispheres are the prime meridian (also called the Greenwich meridian) and the 180th meridian. The prime meridian refers to 0° longitude, an imaginary line that runs from the North Pole to the South Pole through the Royal Observatory in Greenwich, a suburb of London, England. The International Date Line also runs from the North Pole to the South Pole, generally following the 180th meridian (it deviates in a few places to avoid dividing Siberia and to include the Aleutian Islands with Alaska). The prime meridian (0° longitude) and the 180th meridian are on opposite sides of Earth, and together they divide the globe into Eastern (0° to 180° east of the prime meridian) and Western (0° to 180° west of the prime meridian) Hemispheres.

North America

North America is the third-largest continent and is in both the Northern Hemisphere and the Western Hemisphere. The continent stretches from the Isthmus of Panama to the Arctic Ocean and includes Greenland, Canada, the United States (including Hawaii), Mexico, the Caribbean Islands, and the Central American nations of Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama. North America is bordered by the Arctic Ocean in the north, the Atlantic Ocean in the east, the Pacific Ocean and Bering Sea in the west, and the continent of South America to the south.

Caribbean Sea

The Caribbean Sea is an arm of the Atlantic Ocean and is bordered to the north and east by the West Indies, to the south by South America, and to the west by Central America. Since the early 1900s, the Caribbean Sea has been directly linked to the Pacific Ocean through the Panama Canal.

The Caribbean Sea has three major island groups known collectively as the West Indies. The groups are the Bahamas, the Greater Antilles, and the Lesser Antilles.

The islands have a generally warm and sunny climate. Most of the islands fall within the tropics and would be very hot if not for the breezes that move inland from the sea and keep the temperature around eighty degrees Fahrenheit. Many of the islands are prime vacation spots because of their warm weather and sandy beaches.

Gulf of America

The Gulf of America, like the Caribbean Sea, is known for its warm waters. The Gulf is bordered by the southeast coast of North America, from the tip of Florida to the Yucatán Peninsula. Its eastern boundary is the island of Cuba. The Strait of Yucatán links the Gulf to the Caribbean Sea, and the Strait of Florida links it to the Atlantic.

Regions and Their Characteristics

We sometimes talk about the United States in terms of regions, such as New England and the Southwest. These categories are determined by cultural and historical characteristics as well as physical location. As a result, and depending on the context, a state may appear in more than one region.

New England

The New England region is made up of Maine, Vermont, New Hampshire, Massachusetts, Connecticut, and Rhode Island. The climate in the northernmost states is cold in the winter and warm in the summer, while more southerly areas experience milder winters and warmer summers. The New England economy is largely dependent on industry, trade, commercial fishing, and commercial farming.

The term *New England* was used by the English colonists to refer to what they thought they were creating in their colonies—a "new" England. White settlement in this region began with the Pilgrims and Puritans in the 1620s and 1630s CE; the first Thanksgiving is associated with this period. Cities and towns such as Boston, Lexington, and Concord are associated with the American Revolution. Other symbols of New England include lobsters, maple syrup, and village squares.

Mid-Atlantic

The Mid-Atlantic region is made up of New York, New Jersey, Pennsylvania, Delaware, and Maryland (and also Washington, D.C.). With the exception of Pennsylvania, these states directly border the Atlantic Ocean, hence their region's name. Historically, Maryland and Delaware are also considered Southern

states because they had economies dependent on enslaved workers. (During the Civil War, Maryland and Delaware were border states. They did not join the Confederacy but remained slave states until the end of the war.)

This region experiences relatively mild winters and warm summers, often with high humidity. The Mid-Atlantic economy is reliant on industry, trade, commercial farming, and some commercial fishing. Key cities in the Mid-Atlantic region include New York City, often associated with the Statue of Liberty and Ellis Island, and Philadelphia, known for the Liberty Bell and the Mummers Parade. Delaware was the first state to ratify the Constitution. Maryland is often associated with crab cakes due to its proximity to the Chesapeake Bay.

South

The South includes the states of Virginia, North Carolina, South Carolina, Georgia, Florida, West Virginia, Kentucky, Tennessee, Alabama, Mississippi, Louisiana, and Arkansas. For historical reasons, the Mid-Atlantic states of Maryland and Delaware, the Southwest states of Oklahoma and Texas, and the Midwest state of Missouri are sometimes identified as part of the South as well.

Most of the southern climate is humid subtropical. The summers are hot, while the winters are mild. For much of the region, precipitation comes in the form of rain rather than snow, especially in the more southerly parts of the region. The South's economy is largely based on commercial farming, industry, tourism, and oil drilling.

New Orleans, Louisiana, is known as the birthplace of jazz, while Mississippi is considered the birthplace of the blues. Nashville, Tennessee, is an important hub for country music. The South's vibrant tourism industry includes draws like Disney World in Orlando, Florida, and the annual Mardi Gras celebration in New Orleans.

Midwest

The Midwest is comprised of Ohio, Michigan, Indiana, Illinois, Wisconsin, Minnesota, Iowa, and Missouri. Part of the Midwest overlaps with the Great Plains region. The upper Midwest (Michigan, Minnesota, and Wisconsin) was settled in large part by German and Scandinavian immigrants.

Midwestern winters are cold, while summers are warm. Precipitation varies from year to year and from area to area. Much of the winter precipitation is in the form of snow. Major geographical features in this region include the upper Mississippi River, Lake Superior (the largest of the Great Lakes), Lake Michigan, and Minnesota's more than ten thousand lakes. The Midwest is known for its commercial farming and manufacturing industries.

This region is also home to many large cities and industrial centers. Chicago, Illinois, the "windy city," was home to the early meatpacking industry in the United States. Detroit, Michigan, is known as "auto city" and the birthplace of Motown. A portmanteau for "motor town," this music blended elements of blues, soul, and pop and featured Black vocalists like Diana Ross & the Supremes, Marvin Gaye, and Michael Jackson and the Jackson Five. Other cultural figures associated with this region include Paul Bunyan and Babe, his blue ox.

Great Plains

The Great Plains region includes the states of North Dakota, South Dakota, Nebraska, Kansas, and Oklahoma.

The Great Plains region experiences cold winters and warm summers. Precipitation varies from year to year and from area to area. Much of the precipitation comes in the form of snow. The Great Plains' geography and climate make it susceptible to tornadoes and dust storms. The region's economy is based on major commercial farming, including cattle ranching.

Historically, the Great Plains region was inhabited by Native American tribes, many of whom hunted buffalo on horseback. European settlement in this region happened during later phases of westward expansion following the passage of the Homestead Act in 1862. Cattle trails and railheads to bring cattle to Chicago are associated with the region, as is the Dust Bowl of the 1930s.

Rocky Mountain Region

The Rocky Mountain region includes the states of Colorado, Wyoming, Montana, Idaho, and Utah. The unifying characteristic of this region is the Rocky Mountains, a range that runs from Canada to New Mexico. The Rockies are known for their steep, snowcapped peaks, many of which reach over fourteen thousand feet above sea level. By comparison, the tallest peak in the Appalachian Mountains in the eastern United States is around six thousand feet (1,828 meters).

The climate of the Rocky Mountain region varies based on location. To the east of the Front Range, the climate is semiarid, while the western side of the Rockies tends to have a moister climate with more annual precipitation. Cold, snowy winters are typical, making the area a popular destination for winter sports tourism. Temperatures and precipitation vary in the summer months depending on elevation. Snowfall is not uncommon in the late spring and fall. The region is home to numerous national parks, including Colorado's Rocky Mountain, Black Canyon of the Gunnison, Mesa Verde, and Great Sand Dunes National Parks and Montana and Wyoming's Yellowstone National Park. In addition to tourism, mining, agriculture, and technology are other important industries in the region.

The Rocky Mountain region has many cultural associations, including cowboys and ranching, gold and silver mining, and Mormons (Utah). As in other regions, numerous Native American tribes continue to live in the region. Mesa Verde National Park in Colorado preserves cliff dwellings built by the Ancestral Pueblo; the site is considered sacred by twenty-six contemporary tribes.

Southwest

The Southwest region includes Arizona, New Mexico, Nevada, and Texas. The climate in this region is hot, dry, and in many places, desert. The cactus is a symbol of the Southwest's desert climate. The mountain areas of these states receive snow in the winter. In addition to tourism, the Southwest's economy is based on cattle ranching and light industry.

The Southwest was originally inhabited by the Ancestral Pueblo, some of whom lived in cliff dwellings in the Four Corners area. Numerous Native American tribes continue to live in the Southwest, including the Navajo (Diné), whose artisans are known for their intricate weavings and turquoise jewelry.

The first Europeans to colonize the region were Spanish, and their heritage is very apparent in its architectural styles and place names. Spanish influence dates back to the period when much of the Southwest was part of Mexico. As a result, Mexican food is popular in this region.

West Coast

The West Coast region includes the states of Washington, Oregon, and California. This region overlaps with the Pacific Northwest and the Southwest.

The climate of the West Coast region is variable depending on the area. Mountainous areas in California are arid and semiarid. California's southern coast experiences hot summers and cool winters. Washington and Oregon have a temperate climate with mild winters and summers. It is generally rainy there year-round.

Like its climate, the West's economy is diverse. Primary economic activities include mining; cattle ranching; light industry; lumbering; manufacturing paper, wood products, and dairy products; technology; and tourism.

The West is home to numerous cultural associations. Like the Southwest, California's architecture and place names are influenced by Spanish culture. People often associate the West with mining towns, the California Gold Rush, cowhands, and cattle ranching. As in other regions, Native American culture continues to play an important role. Washington and Oregon are associated with the Columbia River and the Lewis and Clark Expedition.

Noncontiguous States

The United States includes two noncontiguous states: Alaska and Hawaii. Both states joined the Union in 1959. Although they are not attached to the continental United States, they are both bordered by the Pacific Ocean.

Alaska is the largest and northernmost state, located five hundred miles above Washington. It is sparsely populated and mostly wilderness. Alaska is home to seventeen of the twenty tallest mountains in the United States, including the tallest peak in North America, Denali (also called Mount McKinley), which stands at 20,310 feet (6,190 meters) above sea level. Like the Great Plains and Rocky Mountain regions, Alaska experiences harsh winters, with temperatures as low as forty degrees below zero Fahrenheit. The state's proximity to the North Pole means that some parts of the state experience twenty-four-hour daylight in the summer and twenty-four-hour darkness in the winter months. Alaska's industries include oil, tourism, lumber, and fishing.

Hawaii is even farther afield than Alaska, located some two thousand miles off the coast of California. The state is made up of eight major volcanic islands surrounded by 129 smaller islands. Most of the state's population is concentrated on a few of the largest islands. Some of the islands' volcanoes remain active today. Hawaii was first settled about a thousand years ago by people who came from islands farther west in the Pacific Ocean; only a small minority of people living in Hawaii today are Native Hawaiians. Hawaii's white sand beaches, tropical climate, and lush forests are a popular draw for tourists. Other important industries include farming, fishing, and forestry.

Other Regional Names

You may encounter other regional names and terms in history texts and contemporary news reports.

- The Gulf Coast refers to the states along the Gulf of America, including Florida, Alabama, Mississippi, Louisiana, and Texas.
- The Southeast refers primarily to North and South Carolina, Tennessee, Georgia, Alabama, Florida, Mississippi, and Louisiana.
- The Pacific Northwest refers primarily to Washington and Oregon, although it may also include Idaho and parts of Montana.

Some of these regions overlap. Which term is used depends on what the topic is. For example, someone interested in finding out which states border the Gulf Coast would not want to know what states are in the Southeast, only which states are along the Gulf Coast.

Fifty States and Their Capitals

Each of the fifty states has a capital city or town. A capital city is the seat of a state government. Most states have a capitol building in which much of the business of a state government takes place.

State	Capital
Alabama	Montgomery
Alaska	Juneau
Arizona	Phoenix
Arkansas	Little Rock
California	Sacramento
Colorado	Denver
Connecticut	Hartford
Delaware	Dover
Florida	Tallahassee
Georgia	Atlanta
Hawaii	Honolulu
Idaho	Boise
Illinois	Springfield
Indiana	Indianapolis
Iowa	Des Moines
Kansas	Topeka
Kentucky	Frankfort

Louisiana	Baton Rouge
Maine	Augusta
Maryland	Annapolis
Massachusetts	Boston
Michigan	Lansing
Minnesota	St. Paul
Mississippi	Jackson
Missouri	Jefferson City
Montana	Helena
Nebraska	Lincoln
Nevada	Carson City
New Hampshire	Concord
New Jersey	Trenton
New Mexico	Santa Fe
New York	Albany
North Carolina	Raleigh
North Dakota	Bismarck
Ohio	Columbus
Oklahoma	Oklahoma City
Oregon	Salem
Pennsylvania	Harrisburg
Rhode Island	Providence
South Carolina	Columbia
South Dakota	Pierre
Tennessee	Nashville
Texas	Austin
Utah	Salt Lake City
Vermont	Montpelier
Virginia	Richmond
Washington	Olympia
West Virginia	Charleston
Wisconsin	Madison
Wyoming	Cheyenne

Changes over Time

"The Star-Spangled Banner" has been the national anthem, or national song, of the United States since 1931. Its lyrics are from a poem written by Francis Scott Key explaining what he witnessed during and after a nighttime battle between the United States and Great Britain at Fort McHenry in Maryland during the War of 1812. Fort McHenry is a coastal fort designed to defend against attacks from the sea. The events referenced in the song took place in September 1814. Key went to a British warship on the night of September 13 hoping to secure the release of some American prisoners. But that same night, the British Royal Navy began bombarding the fort. Key recalled seeing in the morning that the enormous U.S. flag over the fort was still standing—the bombardment had not worked, and the defenders were still holding on to the fort. Key wrote the words of his song as a poem and set them to the tune of a song called "To Anacreon in Heaven."

The song became very popular, but more than a century elapsed until it became the national anthem. The song was used as the U.S. Navy's anthem from 1889 and as the anthem of the U.S. armed forces from 1916, by order of President Woodrow Wilson. In 1931, Congress voted to make the song the national anthem.

The Pledge of Allegiance first appeared in a magazine for children called *The Youth's Companion* in September 1892. The original words were "I pledge allegiance to my Flag and the Republic for which it stands; one nation indivisible, with liberty and justice for all." The pledge was developed by people who wished to find ways to promote patriotic sentiments among the nation's youth.

The Pledge has been revised several times. The phrase "my Flag" was replaced by "the flag of the United States of America" in 1924. In 1942, with World War II underway, the Pledge was officially recognized by the United States government. The phrase "under God" was added in 1954.

About The Louisiana Purchase and the Corps of Discovery

The Western Frontier

When discussing American history, *frontier* typically refers to the region beyond the border of European and American settlement. When teaching about the West in American history, however, it is important to note that *frontier* means the edge of white settlement adjoining Native American territory and that Native Americans were settled beyond the frontier. Where the frontier was and what constituted the American West shifted as the nation's boundaries moved west.

In the colonial period, Europeans thought the frontier was anything to the west of the Atlantic coastal plain. The first English colonists had settled along the coast. By the time of the American Revolution, the frontier line had moved generally west to the Appalachian Mountains. After independence, people began to push inland into the newly acquired lands of the Old Northwest Territory and the Old Southwest. The new United States had received these lands as a result of the peace treaty ending the Revolutionary War. The Old Northwest would become the states of Ohio, Indiana, Illinois, Michigan, and Wisconsin. The Old Southwest was the area south of the Ohio River and would become the states of Tennessee, Kentucky, Alabama, and Mississippi. (Notice that the Old Northwest is not the same as the area we consider the Northwest today; nor is the Old Southwest the same as the modern Southwest.)

By 1803, when the United States, under Thomas Jefferson, bought the Louisiana Territory from France, the frontier had moved west to the Mississippi River as more and more people moved inland. Still, it is important to note that most of the people living between the Appalachians and the Mississippi River at this time were Native Americans. By that time, Kentucky, Tennessee, and Ohio had large enough American populations that they asked for and were granted statehood. The Louisiana Purchase opened up an area west of the Mississippi as far as the Canadian border to the north and present-day Texas and Idaho to the west. This land would eventually become the states of Louisiana, Arkansas, Oklahoma, Missouri, Kansas, Iowa, Minnesota, North and South Dakota, Nebraska, Montana, and Wyoming. In 1845, with the annexation of the Republic of Texas, the United States acquired the present-day state of Texas, the eastern half of present-day New Mexico, and lands along the Arkansas River. The next year, in 1846, the United States acquired part of the British Territory of Oregon in the northwest, which would form the states of Idaho, Washington, and Oregon. Then, with the 1848 Mexican cession and the 1853 Gadsen Purchase, the United States acquired the territory that would become the western half of present-day New Mexico, Arizona, Colorado, Nevada, Utah, and California.

The Louisiana Purchase

In 1800, France, under Napoleon Bonaparte, reacquired the Louisiana Territory from Spain. The French had claimed the Louisiana Territory in 1682 but ceded it to Spain in 1762 after the Seven Years' War. Napoleon was interested in rebuilding France's holdings in North America. Now France controlled the Mississippi River and the port of New Orleans at its mouth. This was the major route by which settlers in the Midwest and South transported their goods to market. Thomas Jefferson, U.S. president at the time, was worried that Napoleon would keep the port closed to American shipping.

Concerned about Napoleon's control of this route, Jefferson sent James Monroe and Robert Livingston to France with an offer to buy New Orleans. Although Jefferson faced much opposition to the purchase for a variety of reasons, he understood the purchase to be an important acquisition for the United States. Napoleon agreed to sell not only New Orleans but also the entire Louisiana Territory. The price was $15 million.

Many factors contributed to Napoleon's decision to sell. By 1803, Napoleon had abandoned his dream of an empire in North America. He had failed to regain the colony of Santo Domingo (known to the French as Saint-Domingue, present-day Haiti) because of resistance from Toussaint Louverture's forces, most of whom had been enslaved Africans who rebelled against and expelled the French during the 1790s. Napoleon also worried that the United States might someday try to take New Orleans by force. In that event, he would not be able to deploy troops to America to defend the territory because he was at war with the British and their powerful navy once again. Most of all, Napoleon was involved in a series of wars with much of Europe and needed money. For all these reasons, he decided it would be wiser to sell all of Louisiana than to try to keep it.

Although President Jefferson had initiated the offer to buy New Orleans, he was not sure that the United States Constitution allowed him to acquire new territory for the nation or to grant citizenship to the fifty thousand or more European and freedman inhabitants of the Louisiana Territory. Jefferson believed that an amendment to the U.S. Constitution was needed. His advisers, however, warned him that it would take time to ratify a constitutional amendment and that Napoleon could change his mind if he had to wait. In the end, Jefferson decided to do what he believed the majority of Americans wanted. He sent the treaty approving the purchase of the Louisiana Territory to the Senate for ratification. Thus, the United States acquired land that more than doubled the nation's size. The Louisiana Territory stretched from the Mississippi River to the Rocky Mountains and from the Canadian border to the Gulf of America.

Lewis and Clark and the Corps of Discovery

Once the American flag was raised over New Orleans, Jefferson was eager to find out what exactly the United States had purchased. He appointed his private secretary, Meriwether Lewis, to lead an expedition into the territory. A former military man and naturalist, Lewis had a great deal of experience in the West (Old Northwest). His co-leader, William Clark, was also a soldier who had seen action in the West and who had experience dealing with Native Americans. Together, they signed up forty-eight men for their Corps of Discovery, and in the spring of 1804, they left St. Louis and set off up the Missouri River.

By the fall of that year, the Corps reached what is today North Dakota. They wintered in a fort they built and named Fort Mandan after the local Native Americans. Among the Mandan, Lewis and Clark met a

French Canadian trader named Toussaint Charbonneau and his Shoshone wife, Sacagawea. Lewis and Clark decided to take them on as guides and interpreters.

In April, the expedition and its new members continued their journey northwest, reaching the Rockies and, eventually, the Great Falls in Montana. The party abandoned their canoes to cross the Rockies on foot and horseback. By late summer, they had reached the Continental Divide in what is now Montana. Once out of the mountains, they built new canoes and paddled them down the Snake River into the Columbia River. They reached the Pacific Ocean by that November. There, they built Fort Clatsop and spent the winter of 1805–6. When spring arrived, the Corps began their return trip home. By September 1806, two years after leaving St. Louis, the Corps was back home.

Jefferson had given Lewis and Clark specific instructions about what the expedition should accomplish. The men were to look for a water route that connected the Upper Mississippi with the Pacific Ocean, to map the region they explored, to establish contact with the Native Americans in the area, and to take notes about and collect specimens of the plants, animals, and minerals they found. These would be sent to Washington, D.C., for further study. The Corps discovered that the Rockies stood in the way of an all-water route to the Pacific. The expedition did, however, establish official relations with many Native American bands. The most valuable information brought back from the expedition consisted of the notes, drawings, and specimens that documented the trip. The Lewis and Clark expedition stimulated interest in the West and opened the way to bringing thousands upon thousands of settlers into the territory.

Sacagawea

Sacagawea was a young Shoshone woman who was the wife of a French Canadian trader, Toussaint Charbonneau. She had been kidnapped as a child by another tribe, the Hidatsa, and the Hidatsa later traded her to Charbonneau. Charbonneau signed on with Lewis and Clark as an interpreter and guide during the winter of 1805–6, along with his wife Sacagawea and their baby. She proved to be of great help in enlisting the aid of Native Americans when the Corps reached the Upper Missouri River. In late summer, the Corps crossed paths with a band of Shoshones led by Sacagawea's brother Cameahwait. Sacagawea persuaded the Shoshones to provide horses for the expedition and to guide the Corps through the mountains of Idaho.

Sacagawea and her family stayed with the Corps as they continued their journey and wintered with them on the Pacific coast at Fort Clatsop. Clark nicknamed Sacagawea's son Pompey and named a notable rock formation in Montana after him, Pompeys Pillar. Sacagawea's knowledge of the natural terrain helped the Corps navigate on the return trip. She and her family parted from the Corps when they returned to the Mandan villages.

About Settlement of the West and the American Indian Experience

The March Westward

Both Americans and immigrants (who began to come in greater numbers after 1820) wanted to make a better life for themselves. But in the early 1800s, the coastal plain was becoming crowded, there was little land left to buy, and there was a limited number of jobs. To own land and to make a living, people were forced to move to less settled areas.

Flatboats, Steamboats, and Canals

American settlers moved into newly acquired western lands on foot, on horseback, in wagons, and in boats. When possible, river travel was the most efficient, and before the steamboat was available, people used canoes, keelboats, flatboats, and rafts to carry passengers and freight. Overland, people used wagons and pack animals to carry them along dirt roads and mountain trails—both of which were little more than tracks that became muddy in the rainy season and treacherously rutted in the winter.

The transportation revolution of the early 1800s greatly facilitated the movement of people to the West. Improvements in steam engine technology enabled new steam-powered boats to be constructed. In 1807, Robert Fulton used a steam engine to power the first passenger steamboat, the *Clermont*, up the Hudson River from New York to Albany. He covered the 150 miles (241 km) in thirty-two hours, averaging a little under five miles per hour (8 km/h)—slow by modern standards, but much faster than a canoe or flatboat could have covered the same distance. His was the first commercially successful steamboat company. By 1811, Fulton's steamboat *New Orleans* was plying up and down the Mississippi, carrying passengers and freight. Steamboats, being fast and large, could carry many passengers and much cargo. They could also navigate upstream against the current.

The steamboat helped ignite the transportation revolution, but without canals, its ability to travel the inland waterways would have been severely hampered. The canal era began in 1825 when the Erie Canal was opened. The canals were the best routes of transportation available, especially for heavy, bulky cargoes such as coal, timber, and stone. By the 1850s, there was a boom in railroad building, offering faster, longer-distance travel than steamboats.

Wagon Trains

Before the transcontinental railroads and regional rail lines were built, linking all parts of the country, people went west by wagon. The wagons, called prairie schooners, were small, four-wheeled vehicles with canvas tops and wooden bodies. They were light enough that they would not sink easily into the soft prairie sod. Teams of oxen or mules, rather than horses, often pulled the wagons. Oxen and mules were preferred to horses because they had more endurance and were less likely to be stolen.

Some pioneers, including women, traveled west alone. Others traveled in small groups, either on foot or on horseback. The most common arrangement was for several families to travel together in an organized wagon train. An experienced leader or an elected head assisted by guides would take command of the group.

Land Routes: The Oregon, Santa Fe, and Mormon Trails

Between 1840 and 1860, about five hundred thousand people went west. Most settlers went to the Oregon Territory and California. The most famous route was the Oregon Trail, which began in Independence, Missouri, and crossed over two thousand miles (3,200 km) of plains, mountains, and rivers. There were a couple of places where the trail diverged. Those wanting to go to California followed the California Trail through northern Nevada into California's Sacramento Valley. The ruts cut by thousands of wagon wheels can still be seen along parts of the Oregon Trail.

The even older Santa Fe Trail went from Independence, Missouri, to the former Spanish capital of Santa Fe. It was first used in 1821 and continued as a major trade route until 1880, when a railroad line was opened. The trail was relatively short—780 miles (1,255 km)—and ran along part of the Arkansas River, where one branch took one into Colorado and then south to New Mexico and another branch ran from Kansas southwest into New Mexico. The Santa Fe Trail, unlike the Oregon Trail, was basically a trade route.

Mormons are members of the Church of Jesus Christ of Latter-Day Saints. The church was founded in 1830 by Joseph Smith. Smith and his followers moved from their original home in New York State to Ohio because they were attacked for their religious beliefs and for practicing polygamy. After being persecuted again, they moved to Missouri, but controversy and resistance followed them, and they were forced to move a third time. In 1844, after they settled in Nauvoo, Illinois, conflict again broke out, and Smith was killed. Under the leadership of Brigham Young, in 1847, the Mormons moved far west to the Great Salt Lake basin in what is now Utah. At the time, the area was part of Mexico.

There, the Mormons irrigated the desert and established farms. They built a prosperous community, and in 1849, after the Mexican-American War, they formed the state of Deseret, with Young as governor. In 1850, Deseret was recognized as the Utah Territory. Utah became a state in 1896.

Railroads

Railroads had several advantages over roads, rivers, trails, and canals. Railroads were dependable, cheap, and convenient. The first railroads were built in British coal mines, but in 1831, the Mohawk and Hudson line was inaugurated between Albany and Schenectady, New York. In 1853, when the Baltimore and Ohio Railroad reached Wheeling, in present-day West Virginia, it achieved what the Erie Canal had done years earlier—it crossed the Appalachians to join East and West. A rail network spread quickly

across the Northeast and the upper Midwest in the 1840s. The rail industry in the Southeast lagged behind that in the Northeast.

By 1861, some thirty thousand miles (48,280 km) of railroad track had been laid down in the United States. The East and Midwest were the focus of much of this track laying, making it easier for people to travel across these regions. The railways made migrating into the Midwest and making a living there easier. The fast, cheap transportation the railroads provided allowed for goods, such as wheat and corn, to be easily shipped to the Northeast for sale. Manufactured items, such as farm tools from the Northeast, could in turn be shipped to consumers in the Midwest. Over time, larger, faster, and more powerful engines pulling heavier cars required tracks made from stronger iron, and eventually steel rails. Coal powered the steam engines, and iron and steel were used in the construction of railroads, bridges, and engines. The demands of the emerging railroad business were an enormous stimulus for such industries after the Civil War.

Construction of the transcontinental railroad began in 1862. The route ran from Nebraska to California. The Union Pacific built west from Omaha, Nebraska, and the Central Pacific built east from Sacramento, California. Irish immigrants did much of the work on the eastern section, which consisted of largely flat and gently rolling plains until the railroad reached the Rocky Mountains. Chinese immigrants did most of the labor on the western portion, and it was rugged, dangerous work that took them over and through mountains and across gorges and part of the Great Basin.

The federal government paid the two companies for each mile of track laid, with higher payments for work in the mountains. The two competing railroads continued building east and west until they met in 1869 at Promontory Point, Utah. The completion of the railroad was marked by a final golden spike being driven into the rail line. By 1900, several transcontinental lines had been laid, joining East and West across more northern and southern routes. These railroads made it easier than ever before to move across the continent.

Settling the West

Gold Rush and the '49ers

In January 1848, John Sutter hired James Marshall to build a sawmill on the American River, which ran through Sutter's property near Sacramento, California. As he worked, Marshall noticed in the riverbed shiny flakes that looked golden in the light. When he examined them more closely, he saw they were gold. Though the two men tried to hide the discovery, word got out, and the rush to find gold was soon on.

Californians took to the rivers and streams looking for gold. At first, much of it was easily found in streams and riverbeds by panning. Miners literally used pans with small holes poked through the bottom. They let the water flow through the holes, and the heavy gold sank to the bottom of the pans. When the gold in and around streambeds was exhausted, people began using pickaxes and other mining equipment to dig deep shafts and tunnels into the ground in search of veins of gold.

By the following summer, close to one hundred thousand people had arrived in California—not just from the East Coast of the United States but from Europe and much of the Pacific basin, especially China. Many came overland by horse and wagon train, but many also came by water. Some sailed around Cape Horn at the tip of South America and up the coast, while others sailed to Panama, trekked overland, and took a ship again from the west coast of Central America.

The '49ers, as the miners were called, were an enterprising group of men and women. Most miners were young men who expected to make their fortune and then return home. Some family men brought their wives and children along, expecting to stay. Single women, hoping to find gold or to earn money cooking or doing laundry for the miners, traveled to California as well. Some free African Americans came, as well as some southerners who brought their slaves to mine for them. Even though few miners found a substantial amount of gold, many stayed for California's genial climate and the rich farmland.

Homestead Act of 1862

Settlement of the Great Plains—the land between the Mississippi and the Rockies—did not take place to any great degree until after the Civil War. During the war, Congress passed the Homestead Act of 1862, which encouraged people to settle on lands in the West. Many of them built farms on the northern Great Plains. The government announced it would give 160 acres (64.7 ha) of land to any citizen or immigrant who was willing to farm it for five years. Land could also be bought for $1.25 an acre (0.4 hectare) after six months of living on it. Before this law was passed, people had either bypassed the Great Plains in favor of the fertile Northwest or been lured to California by the get-rich-quick tales of the gold rush. However, because the Homestead Act was so ambiguous, it was open to massive fraud. Of the five hundred million acres (200 million ha) distributed by the act by 1904, only eighty million (32.4 million ha) had gone to farmers. The rest went to land speculators, cattle ranchers, miners, loggers, and railroad companies.

In the late 1800s, largely because of the Homestead Act, many thousands of white Americans, as well as many freed slaves (known as Exodusters) and European immigrants, relocated to the Great Plains. These settlers established farms and ranches on the plains. Because trees were scarce on the Great Plains, many settlers built "sod houses" by cutting and piling up blocks of grass and turf. Farmers battled with great swarms of grasshoppers and other insects that devoured their crops. They raised windmills to bring water up from below the earth's surface, and they used a new invention called barbed wire to help fence in their livestock.

Life on the Great Plains was hard. Some parts of the plains were fertile and received enough water for successful farming, but other parts suffered occasional droughts, which made farming impossible and led to blinding dust storms. When these droughts struck, they drove farmers out of business.

Manifest Destiny

The term *manifest destiny* was coined in the 1840s. The phrase appeared in an editorial in the *United States Magazine and Democratic Review* in 1845. The editorial said that the United States had a "manifest destiny to overspread the continent allotted by Providence." *Manifest* means clear or obvious, *destiny* means something that is bound to happen, and *Providence* refers to God's oversight of the world. The term came to signify to many that God had given the United States a clear right to extend its authority across the continent and that the nation was destined to do so. This idea was popular with many Americans during the 1840s and 1850s. They had seen their country growing and concluded it was destined to continue growing until it covered the whole continent. "Manifest destiny" was an expression of pride in the young, growing nation, but it was also a way of justifying the displacement of Native peoples and supporting other land-hungry actions of the 1800s.

Native Americans and Western Expansion

From the beginning, the new United States' dealings with Native Americans resulted in a string of conflicts, misunderstandings, epidemics, skirmishes, wars, broken treaties, and unfulfilled promises. Until 1871, the federal government recognized Native Americans as sovereign nations and negotiated treaties with them for a variety of things such as trade agreements, military alliances, an end to hostilities, and land cessions. Sometimes these treaties were freely negotiated, and other times they were the result of wars. By the American Revolution, many of the Natives in present-day New England and the mid-Atlantic had migrated into Canada or west to the Great Lakes region. Those who remained were confined to small reserves of land. After the American Revolution, American settlers and land speculators hoped to acquire lands reaching to the Mississippi River. In 1790, Native peoples living north of the Ohio in the Northwest Territory (present-day Ohio, Illinois, Wisconsin, Michigan, Indiana, and eastern Minnesota) joined in a military alliance under the Miami leader Little Turtle. Warriors from the Iroquois, Miami, Shawnee, Kickapoo, Ottawas, Ojibwe, and Potawatomi joined in an effort to resist American encroachments. Over the next four years Native troops skirmished with American troops and American squatters. President Washington then sent in the U.S. Army under General Anthony Wayne to crush the resistance. In 1794, Native troops retreated after the Battle of Fallen Timbers. A year later, they were forced to sign the Treaty of Greenville, by which they had to cede much of their claims to the Northwest Territory. However, Native resistance rose again in 1810 when the Shawnee warrior Tecumseh led another pan-Indian uprising across the Midwest. Tecumseh and his allies joined the British, and the British-aligned Natives were defeated in the War of 1812. Afterward, those Native communities that remained were forced onto small reservations, and many would be forcibly removed to Indian Territory (Iowa, Nebraska, Kansas, and Oklahoma) in the 1830s and 1840s.

Forced Removal to Reservations

The largest Native American nations of the southeastern United States—the Cherokee, Creek, Choctaw, Chickasaw, and Seminoles—became known as the "Five Civilized Tribes" due to their adoption of constitutions, laws, and other aspects of white or European culture. By the 1820s, prominent federal and state officials and wealthy land speculators were pressuring the federal government to acquire Native lands east of the Mississippi River. In 1830, President Andrew Jackson supported passage of the Indian Removal Act. The Removal Act legislated that Congress could purchase Native lands, and in exchange, Native groups would receive lands across the Mississippi River in what was known as Indian Territory (present-day Oklahoma, Kansas, and parts of Nebraska and Iowa). With threats of invasion and war, Jackson pressured Native leaders to sign removal treaties. In the Southeast, the so-called Five Civilized Tribes and their enslaved African Americans were removed to present-day Oklahoma. The Choctaw signed a treaty in 1830, followed by the Creek and Chickasaw in 1832, a group of Seminoles in 1832, and the Cherokee in 1835. Tens of thousands of Native people were removed from the eastern United States. However, some, such as a group of Seminoles, managed to escape the forced roundups and were granted small tracts of land in the twentieth century.

Although some groups such as the Seminoles resisted removal through warfare, the Cherokee sought to fight removal using the American judicial system. In two lawsuits that went all the way to the Supreme Court, Cherokee rights to their lands were upheld. But President Jackson and the state of Georgia ignored both decisions, and, seeing the inevitable, between three and four thousand Cherokee agreed to move. By 1838, some fifteen to sixteen thousand still remained in the Southeast. Jackson was no longer president, but his successor, Martin Van Buren, decided to enforce the move. The Cherokee's

forced march to the Indian Territory became known as the Trail of Tears. The four-month trek took place in winter, and it is estimated that, out of the thirteen thousand who migrated, about four thousand men, women, and children died along the way. Those who escaped removal eventually received some land in North Carolina and became the Eastern Band of Cherokee Indians.

Once in Indian Territory the Five Tribes rebuilt their towns, governments, and livelihoods. However, the Five Tribes joined the Confederacy during the Civil War, which proved devasting to those in Indian Territory. At the war's conclusion, the United States forced the Five Tribes to cede over half the lands in Indian Territory that had been promised to them and to abolish slavery. The United States would combine these ceded lands and Indian Territory into the state of Oklahoma in 1907. Even so, the Five Tribes retained their sovereign status, but over the next decades, the state of Oklahoma and the federal government whittled down Native rights, sovereignty, and landholdings through land appropriations and legal maneuvers. However, the Five Tribes fought these efforts, and today they retain their governments, most of their national territories, and their sovereignty.

The Plains Wars

In the mid-1800s, the U.S. government sought to pressure groups on the Great Plains into ceding large portions of their territories. In these treaties, the United States guaranteed to reserve a portion of a group's homelands for them. Some groups succumbed to this pressure and voluntarily congregated on the reserves, or what came to be known as reservations. However, many chose to resist the pressure to cede their lands and to fight the United States in battle if necessary.

The period from the 1850s to the 1880s on the ever-westward-moving frontier saw several conflicts between settlers and soldiers and the increasingly desperate Native American population. These conflicts are sometimes called the Plains Wars. It is not surprising that some Native Americans resisted westward expansion.

Crazy Horse

Crazy Horse (Ta-sunko-witko), a chief of the Oglala Lakota Sioux, was one of the strongest leaders of the Native American resistance on the Great Plains. During the 1850s, he acquired a reputation as a great warrior, based on the bravery he displayed in conflicts with other groups of Native Americans. Later, Crazy Horse would turn these skills against the American military.

In the 1860s, Crazy Horse refused to remain on the reservation assigned to his people, insisting instead on venturing out to hunt bison. He also led attacks on the army and white settlers. In 1866, he joined forces with Oglala Lakota leader Red Cloud and led a party of roughly one thousand warriors in an attack on soldiers near Fort Kearny in the Wyoming Territory. Crazy Horse led a decoy party that drew the commander and some soldiers out of the fort. The soldiers were then ambushed by a large Native American force, and eighty soldiers were killed. The defeat, known as the Fetterman Massacre, was one of the worst defeats the army had suffered at the hands of Native Americans up to that point. This was the beginning of a two-year conflict with the Lakota known as Red Cloud's War.

In the 1870s, Crazy Horse led additional attacks on railroad workers and the army. He and his followers helped destroy the troops of George A. Custer at the famous Battle of the Little Bighorn. After Little Bighorn, the army pursued Crazy Horse more intensively. He was forced to surrender in May 1877. Later that year, he was killed during a tussle with a guard. A memorial to Crazy Horse is currently under construction in South Dakota.

Sitting Bull

Sitting Bull (Tatanka Iyotake) was a Hunkpapa Lakota Sioux chief who led the Lakota Sioux tribes in their efforts to resist American expansion. As a young man, he gained a reputation for bravery and skill in battles against the Shoshones and other tribes.

Sitting Bull began a long career of resistance against the U.S. Army and American settlers in 1863. Along with Red Cloud and Crazy Horse, he became a chief leader of Native American resistance.

In 1868, the Sioux made a peace treaty with the U.S. government that gave the Sioux a reservation that covered most of present-day South Dakota and included their sacred Black Hills. The Lakota Sioux, however, continued their resistance against American encroachments. Many, including the villages of Sitting Bull and Crazy Horse, continued to live outside the reservation boundaries, and many continued their raids on American settlers, railroad workers, and U.S. troops. Meanwhile, the United States launched exploration expeditions into Sioux lands, scouting for resources and mapping the region. Lieutenant Colonel George Armstrong Custer led an expedition that discovered gold in the Black Hills. The news spread quickly to the East, and although it was illegal to do so, American miners flooded into the area. The U.S. military did little to prevent the trespassing and instead tried to pressure the Lakota for another land cession. The Lakota refused, and when they began to threaten war, U.S. military officials ordered all Lakota onto the reservation; those who refused would be hunted down. Sitting Bull, Crazy Horse, and others living off the reservation did not comply. The noncomplying Native American chiefs camped in the valley of the Little Bighorn River. As the Lakota and their allies were preparing for war, Sitting Bull performed a ritual known as the Sun Dance and entered into a trancelike state. He reported that he saw the defeat of army soldiers, which foretold the defeat of Custer and his men at the Battle of the Little Bighorn.

After Little Bighorn, the United States applied additional pressure. Sitting Bull and other Sioux who continued to resist the government went to Canada and lived there from 1877 to 1881. By this point the bison population, on which the Sioux depended, was rapidly waning. Many of the Sioux suffered from hunger, and growing numbers began to surrender. Sitting Bull continued to lose followers to starvation and finally was forced to surrender.

For some time, Sitting Bull was confined to the Standing Rock Reservation. Then, in 1885, he was allowed to join Buffalo Bill's Wild West show. He was paid $50 a week for riding around the arena, and he gained a popular following; however, Sitting Bull remained with the show for only four months. He returned to the Standing Rock Reservation. By 1890, a religious movement known as the Ghost Dance was sweeping across the Great Plains. U.S. officials were wary of the movement because it called for Native Americans to give up all the ways of the white people and claimed that by so doing, they could return to their old ways. On December 15, 1890, the United States sent Indian police to arrest Sitting Bull for fear that he was involved in the Ghost Dance. Sitting Bull was shot and killed in the ensuing confusion.

Battle of the Little Bighorn

The Battle of the Little Bighorn is also known as Custer's Last Stand. The Little Bighorn River flows through southeastern Montana. It was on its banks, on June 25, 1876, that Lieutenant Colonel George A. Custer and part of his Seventh Cavalry were completely destroyed. Sioux and Cheyenne forces, led by Chiefs Crazy Horse and Gall, carried out the attack.

Custer was a headstrong and even reckless army officer who had previously been court-martialed and suspended from command. He also had the reputation as a fearless and ruthless fighter of

Native Americans. He was reinstated to command in 1868 and ordered to lead a campaign against Cheyenne who had been raiding in Kansas. Instead of pursuing the raiders, though, Custer attacked a peaceful band of Cheyenne camped on the Washita River in their reservation. The subsequent massacre of men, women, children, and elderly outraged Native Americans but restored Custer's military reputation.

As noted above, the government then ordered the Sioux onto reservations by February 1876. Sitting Bull and many others did not comply, and the federal government sent the army out looking for them. Custer's Seventh Cavalry was part of a large U.S. force deployed to round up or kill any Native Americans in the Powder River region who were not on their reservations. Custer's cavalry was sent to reconnoiter the Little Bighorn River valley. After they spotted a large Cheyenne and Lakota encampment by the Little Bighorn, Custer sent one of his captains, Marcus Reno, to raid the southern end of the village and another, Captain Frederick Benteen, to scout the area. Custer was to raid the northern end of the village, but he miscalculated where the northern end was and set up a skirmish line outside of the encampment. Then Sioux and Cheyenne warriors, led by Crazy Horse and Gall (a Hunkpapa war leader), found Custer's line and attacked. Sitting Bull, who was elderly by now, most likely helped design the attack but did not participate in the battle. Custer and his men were surrounded and killed within minutes. Those with Benteen and Reno retreated to a bluff later known as Reno's Hill, where warriors continued to attack them until nightfall. The next day, the column led by General Alfred J. Terry reached Reno's Hill and managed to extract the U.S. troops.

The army gave chase, and by winter 1876–77, most of the Lakota Sioux who had participated in the war, including the encampment of Sitting Bull, either had fled into Canada or, seeing no hope of outrunning and outlasting the army, had surrendered. Those who surrendered were sent to reservations. Crazy Horse was captured and killed in 1877. In 1881, Sitting Bull and his band returned from Canada and went into reservation life.

Wounded Knee

After the death of Sitting Bull, Hunkpapa Lakota Sioux joined Spotted Elk, Sitting Bull's half brother (also known as Big Foot), and his band of Minionjou Lakota Sioux in 1890. The group of about 350 men, women, children, and elderly left the Standing Rock Reservation for the Pine Ridge Indian Reservation, about 280 miles away. U.S. Army general Nelson A. Miles ordered the group to be arrested, disarmed, and detained. He sent a U.S. military detachment of about five hundred soldiers, led by Colonel James W. Forsyth, to escort them to Wounded Knee Creek on the Pine Ridge Reservation. Forsyth was to detain them there. Like his half brother, Big Foot was a strong supporter of the Ghost Dance. The Ghost Dance was a religious movement that united several Native American groups, which made U.S. leaders worried. People who took part in the Ghost Dance believed that the ghosts of the dead would return soon to drive away the settlers. At Wounded Knee, Forsyth positioned four cannons overlooking the camp and ordered his men to collect all the Natives' weapons. One man resisted relinquishing his gun, and in the ensuing struggle, the gun went off. The soldiers then opened fire with guns and cannons. Those Natives who were not killed immediately fled into the ravine and prairie, where soldiers hunted them down and killed them. At least 270 Native Americans died at Wounded Knee, and at least 170 them were women and children. The army suffered twenty-five dead and thirty-nine wounded, though many of these were probably victims of friendly fire.

The massacre at Wounded Knee—some call it a battle, although it was not—put an end to the Ghost Dance movement, and though scattered Native American resistance continued, the Wounded Knee Massacre is widely seen as marking the end of the Indian Wars.

About New Industries and Improved Transportation

The Beginnings of Industrialization

The First and Second Industrial Revolutions had a tremendous impact on Europe and the United States from the 1700s well into the 1900s.

Before Industrialization

Prior to industrialization, the economies of Europe and the United States were mostly agrarian in nature. Individuals and families had a largely subsistence existence; they produced the majority of their own food as well as other goods that they needed to survive. What they could not produce or make themselves, they purchased from various craftspeople. Craftspeople at the time engaged in small-scale, home-based manufacturing. Goods were produced using simple machines and various small tools. Over time, cottage industries emerged. Manufacturers provided employees with equipment and materials, and employees conducted the work within their own homes.

The First Industrial Revolution

The First Industrial Revolution took place in Great Britain from the 1760s through the 1830s. During this time, technological developments—including increased use of iron and steel, the utilization of new energy sources, improved transportation, and the invention of new machines—revolutionized the economy and society of Great Britain. Improvements to farming technology made it possible for farmers to produce more food while simultaneously requiring fewer laborers. The reduced need for farm laborers coupled with the rise of factories in urban areas led many workers to seek employment in cities. The number of opportunities for skilled laborers declined, while opportunities for unskilled laborers, including small children, grew. It was normal at the time for working-class children to work many hours in a day.

As in Great Britain, the textile industry laid the groundwork for industrialization in the United States, thanks in part to the help of Samuel Slater. Throughout the 1700s and early 1800s, the British government kept a tight hold on the innovations and technologies that made industrialization possible, thus preventing industrial development in other countries and ensuring its economic dominance. Textile workers, such as Slater, were prohibited from leaving Great Britain. Slater defied British law and secretly left the country for the United States in 1789. He then helped design and erect the first successful American cotton mill, in Pawtucket, Rhode Island.

Industrial North vs. Agricultural South

The Civil War, or the War Between the States as it was known in the South, arose out of social, political, and economic differences between the Northern states, where slavery had gradually been abandoned, and the Southern states, where slavery had become both an economic system and a part of the culture—even though most white Southerners did not own slaves.

In reality, there were very few large plantations in the South and many small farms. The large plantations had anywhere from twenty to two hundred slaves. Most plantations grew tobacco or cotton, but some grew rice (in South Carolina) or sugar cane (in Louisiana). The crop depended on whether the plantation was located in Virginia, Kentucky, Tennessee, or North Carolina, where tobacco was the chief crop, or in the Deep South, where cotton was king. Small farmers typically raised their own food and a small cash crop like tobacco or cotton; usually, they owned few, if any, slaves. There were few wealthy small farmers. However, the rich planter with a large plantation worked by hundreds of slaves became the ideal to which many poor white Southerners aspired. This ideal took hold in their imaginations and partly explains why so many poor Southerners were willing to fight for an institution from which they did not directly benefit.

Southern intellectuals developed certain arguments to justify the continued use of human beings as slaves. One argument said that slavery was essential to the Southern economy, which was based on the cultivation of cotton, a very labor-intensive crop. White Southerners who made this argument, especially John C. Calhoun, pointed to the abuse of workers in Northern mills and factories and claimed that slavery was actually preferable to working in such a mill, even though enslavement involved brutal treatment. Enslavement, they said, ensured that slaves had food, clothing, and shelter, regardless of whether they were healthy and able to work or too ill or too old to work. Some Southerners made religious arguments and claimed that certain Bible passages seemed to sanction slavery. Another argument used was the racist argument that Black people were inherently inferior to white people and needed to be taken care of, like small children.

The North by this time had become the center of American industry. Northern farms were small for the most part and had little potential for great wealth; they could not grow cotton or tobacco or other large-scale cash crops. However, certain parts of the North were well suited to the development of industry, and the Industrial Revolution that had begun in Great Britain had quickly taken hold in the Northeast. The North had reserves of coal to produce power for factory machines, and it had an abundance of people to run the machines. People were moving away from farms, and thousands of immigrants were entering the country every year. By 1860, almost all of the nation's industry and most of its banking and financial centers, rail lines, and coal, iron, and gold reserves were located in the North.

Advancements in Transportation

The Steamboat

Although Robert Fulton is often credited with designing the first American steamboat, that honor actually belongs to John Fitch, a Revolutionary War veteran who designed and tested the first steamboat in 1787. Although his steamboats were successfully used in the Northeast, they never gained

much public enthusiasm prior to his death in 1798. Robert Fulton and Robert Livingston's *Clermont* is notable not only because it was the first steamboat to be put into public service but also because it demonstrated that transportation by steam propulsion could be economical.

The *Clermont* made its maiden voyage in 1807 up the Hudson River from New York City to Albany, New York, at a speed of five miles per hour (8 kmph). Fulton and Livingston had a different steamboat built for the waters of the lower Mississippi River in 1811. The *New Orleans* could only go eight miles per hour (13 kmph) downstream and three miles per hour (5 kmph) upstream. The Mississippi has a relatively shallow riverbed, and steamboat builders quickly learned to adapt. Henry Miller Shreve of Shreveport, Louisiana, built his version of the steamboat on top of a barge-like base and added a tall second story. His 1816 design became the standard for all Mississippi River steamboats, which became faster as the years went on.

It's hard to overstate the importance of the steamboat's role in Mississippi River trade through 1870. Steamboats were the primary mode of transportation for bringing Southern agricultural products, including cotton and sugar, to the North and West. Manufactured goods from the North flowed in the opposite direction. New Orleans was the region's most bustling river city. In 1814, it had about twenty different steamboats arriving at its docks. By 1834, it had 1,200.

Some of those steamboats carried both freight and passengers. The largest of those boats were luxuriously appointed with plush guest cabins, ornate rugs, oil paintings, and even chandeliers. The wealthy people who traveled by steamboat traveled in style. Yet for all the trappings of wealth, there was no denying that early steamboat travel was inherently dangerous. Most steamboats remained in service for only four or five years. This was in part due to poor construction and ongoing maintenance but also because of the dangers lurking beneath the river waters. Boats could easily hit rocks or embankments and sink. Sometimes the danger came from within the boat itself. Steam boilers were known to explode, often leading to the death of everyone in their vicinity. Between 1810 and 1850, there were approximately four thousand steamboat-related deaths.

Early Railroads

Throughout the early to mid-1800s, small, local railroad lines cropped up across the country. Railroad tracks were not a new invention; they had been used in England since the 1600s as a way to move large, wheeled loads with less friction. This practice came to North America with early European settlers. Some large loads were pulled by horses (which is where the term *horsepower* comes from), while others were assisted by gravity on rails that ran downhill. While both methods were efficient for moving heavy items short distances, neither were suited for long journeys or for transporting passengers.

That changed with the introduction of the locomotive steam engine. John Stevens, known as the father of the American railroad, tested his own version of the steam locomotive on his estate as early as 1826. Over in Great Britain, George Stephenson created the first commercially successful steam locomotive in 1829. Stephenson's design and others similar to it were used at first in the United States, but steam locomotives didn't last long. North America's rough-and-tumble terrain, coupled with the relatively low-quality tracks used by rail companies, was too much for British machinery. American locomotives had to be simpler, stronger, and capable of going up steeper grades.

The first railroad chartered for passengers and freight in the United States was the Baltimore & Ohio (B&O) Railroad. It opened in 1830 with just fourteen miles (22.5 km) of track. Other rail companies followed suit. In general, railroads began in eastern port cities such as Baltimore, Boston, and

Charleston, South Carolina, and ran to another, fairly close city. This pairing of cities by rail occurred from approximately 1828 to 1850. After 1850, rail companies shifted their focus to building rail lines that crossed the Appalachian Mountains. Once that was completed, railroads were established throughout the interior of the country.

The idea for a transcontinental railroad was first publicly proposed in 1844, but it didn't really take off until 1862, when Congress passed the Pacific Railway Act, authorizing its construction. The Civil War halted progress on the coast-to-coast railway, which wasn't completed until 1869.

About Slavery, Civil War, and Abolition

Slave Life

The first enslaved Africans in the Americas were brought by the Spanish to the Caribbean in the early 1500s CE to work on farms and in mines. The first Africans in the English colonies on the mainland arrived at Jamestown in 1619 CE. These first Africans are believed to have been indentured servants—people who were contracted to work for a certain period of time without pay and then released to work for themselves. The status of Africans changed gradually over the years, and by the 1680s, the term of service had changed to lifelong enslavement. By then, it was difficult to find enough workers to farm the large tobacco plantations that some white colonists were starting in Virginia, and importing Africans seemed to promise a steady supply of labor.

In the 1700s, importing Africans as slaves for the Southern colonies became big business for white merchants and sea captains, many of whom were based in New England. The climate and terrain of New England were not suitable for large plantation-style farms. Slavery, therefore, did not become the basis for the economy in New England, although there were some slaves in those colonies, which profited from selling enslaved Africans to the Southern colonies. Slavery was less important in the Middle colonies as well. New York, for example, had the most slaves of any colony north of Maryland, with more than ten thousand slaves—almost 20 percent of the total population—in the mid-1700s. Most of these slaves lived in New York City. Most farms in the Middle colonies were small and tilled by families, although there were slaves both on farms and in cities, where they worked in houses and as skilled artisans and craftworkers.

The situation was quite different in the South, where there were many farms that ranged in size from small, with simple homes, to large, elaborate plantations. While most Southerners did not own any slaves at all, the vast majority who owned small farms had fewer than twenty slaves. Only a few farms were large enough to be considered plantations with crops—tobacco, indigo, and later, cotton and sugar—that required large numbers of workers. Most plantations had anywhere from twenty to two hundred slaves. The plantation system, which the Spanish and Portuguese had developed on islands in the Atlantic and which had also been established in British colonies in the Caribbean, was adopted to address Southern colonists' need for workers on these large farms.

The owners of the plantations lived in large, well-furnished houses, while the people they enslaved lived in separate slave quarters—a cluster of small cabins (shacks, really) with a few sticks of furniture, straw for mattresses, a cooking pot, and little else. The slaves often worked in the fields from sunup to sundown. Slaves had little time to themselves to care for their families or tend their own gardens to supplement the food rations they were given by their enslavers. Enslaved Africans were not paid for their work, so they could not buy extra food, clothes, or other necessities. Everything they had was given to them by their enslavers. However, in some areas of the South, slaves were able to establish a trade network to gain cash and goods in exchange for their personal crops and craft goods.

Slaves could not leave the plantation without permission, and by the early 1800s, laws had been established that prohibited slaves from learning to read and write. About the only thing they could do that their enslavers did not interfere with was go to church—as long as it was a Christian service. Slaveholders discouraged the practice of religions that slaves had known in Africa, including Christianity and Islam, but slaves did retain some aspects of their African culture in their religious practice. Slaves also embraced biblical stories about freedom, particularly the story of Moses leading the Israelites out of slavery in Egypt.

Abolitionists

There had been calls for the abolition of slavery since before there had been a United States. The first formal abolitionist organization was formed in 1787 when a group of free African Americans met in Philadelphia and founded the Free African Society to work for the end of slavery.

Although the U.S. Constitution ended the foreign slave trade in 1808, the inter- and intrastate slave trade continued, and by the 1830s, slavery had become entrenched in the Southern states. As the practice of slavery grew, ordinary people (many of them slaves or former slaves) actively opposed it, creating what became known as the abolitionist movement.

Being an abolitionist—especially an outspoken activist—was dangerous. Those who supported slavery often used violence to try to silence critics. They burned the homes and offices of abolitionists, ran abolitionists out of town, and even murdered some.

William Lloyd Garrison

William Lloyd Garrison was an influential white abolitionist who published *The Liberator*, an abolitionist newspaper. Garrison had begun the paper in 1831 in Boston, a center of the abolitionist movement. Garrison's aim was an immediate end to slavery. Many people felt this was a radical idea. They felt that slaveholders should be compensated for the loss of their so-called property.

Garrison advocated that the North should secede from the South. When people pointed out that slavery was protected by the Constitution, Garrison said that any document that supported slavery should be burned, even the Constitution. In 1854, he actually did burn a copy of the Constitution, calling out, "So perish all compromises with tyranny!" Garrison's extreme views led to disagreements between him and others, including Frederick Douglass. But Garrison was unapologetic. He wrote:

> I *will* be as harsh as truth, and as uncompromising as justice. On this subject, I do not wish to think, or to speak, or write, with moderation. No! no! Tell a man whose house is on fire to give a moderate alarm; tell him to moderately rescue his wife from the hands of the ravisher; tell the mother to gradually extricate her babe from the fire into which it has fallen—but urge me not to use moderation in a cause like the present. I am in earnest—I will not equivocate—I will not excuse—I will not retreat a single inch—AND I WILL BE HEARD.

Garrison's attacks on slavery made him unpopular in the South. The state of Georgia, angered by his message, offered a reward for his arrest and conviction, and he received numerous death threats. Even many in the North did not approve of his views. On one occasion, a Boston mob looped a rope around his neck, as if threatening to hang him, and paraded him through the streets.

After the emancipation of the slaves, Garrison continued to work for reform in areas that included temperance and women's rights.

Frederick Douglass

Among the most notable abolitionists was Frederick Douglass. Douglass was an escaped slave who wrote an autobiography describing his life as a slave and who later published the abolitionist newspaper *North Star*. Born on a plantation in Maryland, he was sold and sent to a married couple in Baltimore. While he was there, the slaveholder's wife began teaching him how to read but had to stop when her husband discovered what she was doing and forbade her from teaching Douglass anymore. Douglass was very disappointed that his reading instruction stopped, but he felt fortunate to discover the value of reading by listening to his enslaver's arguments against teaching him. Douglass, now determined to gain these skills, continued to learn to read and write the letters of the alphabet by asking neighborhood boys to help him and sometimes tricking them into teaching him by giving them bread. At twenty-one, while working in a Baltimore shipyard, he was able to pass himself off as a sailor and get a job on a ship. He landed in New Bedford, Massachusetts. An articulate and powerful writer and speaker, by 1845 Douglass was an important figure in the abolitionist movement, writing and lecturing about the inhumanity of slavery. His autobiography, *Narrative of the Life of Frederick Douglass, an American Slave*, was published in London, and he traveled there to speak out against slavery in the United States.

Douglass was not alone on the abolitionists' lecture circuit; those who joined him included Sojourner Truth, a former slave, and Harriet Tubman, a former slave who became a conductor on the Underground Railroad.

Sojourner Truth

Sojourner Truth (born Isabella Baumfree) was born into slavery in New York State in 1797. Separated from her parents and siblings at an early age when she was sold, Truth was transferred from slaveholder to slaveholder, often multiple times within one year. New York State gradually transitioned out of slavery in the mid-1820s; by 1827, it would be abolished for good. But Truth's slaveholder had no plans to emancipate her, as Northern slaveholders often sold their enslaved persons to the South on the eve of emancipation deadlines in the North. So in 1826, Truth escaped to the farm of an abolitionist family with her baby daughter, Sophia. The family paid twenty dollars for Truth's freedom and helped her recover her son, Peter, who had been illegally sold into slavery in the South.

Truth had always interpreted the visions and voices that had been in her head since childhood as messages from God. She became part of New York City's religious revival movement in the late 1830s. By 1843, Isabella Baumfree had renamed herself Sojourner Truth because she always spoke truthfully about the causes she believed in. During her travels through the Northeast, she met William Lloyd Garrison and Frederick Douglass, both of whom spoke to her about abolition and suggested that she also speak publicly about her experiences as an enslaved person.

Truth did. She couldn't read or write, so she dictated her book, *The Narrative of Sojourner Truth*, to a writer. She toured the Midwest and supported herself by selling copies of the book in every town she visited. It was during this time that she also became a famous proponent of the women's suffrage movement.

Truth left New York City and settled in Battle Creek, Michigan. From there, she helped recruit soldiers for the Union Army and organized supply drives for African American troops during the Civil War. In 1864, she went to Washington, D.C., to meet President Abraham Lincoln, and she managed to help integrate the local streetcars while she was there. After the war, she worked closely with the Freedmen's Bureau, which was formed to help find jobs for formerly enslaved people.

Harriet Tubman

Harriet Tubman (born Araminta Ross) was born in Maryland sometime between 1820 and 1822. She was born into slavery and began working at age five. At twelve, she was hit in the head with a heavy iron weight after refusing to help punish another enslaved person and subsequently suffered from seizures for the rest of her life.

Tubman married John Tubman, a free African American man, when she was in her mid-twenties. John did not accompany Tubman when she escaped slavery in 1849. She fled to freedom in Pennsylvania but went back to Maryland less than a year later to help her sister and her sister's children to freedom. Then she made another trip. In all, Tubman made thirteen trips into Maryland and guided seventy fugitive slaves along the Underground Railroad to safety in Canada.

Tubman made her last trip on the Underground Railroad in 1860. During the Civil War, she served as a scout, a nurse, a laundress, and a spy for Union forces. Prior to her death in 1913, she became an advocate for women's suffrage.

Abraham Lincoln

Abraham Lincoln was born in poverty on the Kentucky frontier. Largely self-educated, he became a much-respected attorney.

Lincoln was first elected to public office in 1834. Although he was defeated in his Senate bid in 1858 against Illinois Democrat Stephen A. Douglas, Lincoln won attention from the national Republican Party, which nominated him for president in 1860.

The issue of slavery divided the nation in the 1860 election. Lincoln, as the candidate of the Republican Party, pledged to stop the spread of slavery. Neither the Republican Party nor Lincoln himself promised to abolish slavery. In fact, Lincoln took great pains to make it clear that he *wasn't* an abolitionist. Although he personally deplored slavery and felt it was a violation of a human's natural rights, he initially thought its end should be gradual and that slaveholders should be compensated by the government for the loss of their "property." Lincoln did not believe that Congress had the authority to abolish slavery in states where it already existed. However, he staunchly opposed the extension of slavery in new territories and states.

Lincoln had changed his mind by the time he issued the Emancipation Proclamation in 1862. Historians believe one of the reasons for this was that thousands of enslaved people risked their lives by running away from their plantations to assist Union soldiers in the battle against the Confederacy. Several Union regiments consisting of African Americans, who had been free before the war or *de facto* freed by Union troops, were forming, too. These people's actions helped Lincoln understand that the problem of slavery needed to be addressed all at once, not gradually.

The Emancipation Proclamation

During the early years of the Civil War, Lincoln was eager to issue an Emancipation Proclamation freeing slaves, but he hesitated to do so for fear that his action might harm the Union cause. Emancipating the slaves was an idea opposed by many Northern workers who feared competition from newly freed—and jobless—slaves. Lincoln was also concerned that the border states would leave the Union if slaveholders

there were deprived of their slaves. On the plus side, however, Lincoln believed that an Emancipation Proclamation would win over Europeans who had already abolished slavery, especially the British. It was important to Lincoln that the British not trade with the Confederacy. If the Confederacy could sell its cotton to the British, it could gain money and buy supplies to help with the war effort.

Abolitionists had lobbied for the immediate end of slavery since the early 1830s, and as the war continued, more Northerners began to see the need for emancipation. In addition to humanitarian concerns, they were moved by a desire to punish the South for secession.

Finally, in September 1862, after Confederate general Robert E. Lee was stopped at the Battle of Antietam, Lincoln issued the Emancipation Proclamation. The proclamation was to go into effect on January 1, 1863. There is often confusion about what the Emancipation Proclamation actually did. The document promised to free all slaves in those states or parts of states that were still under the control of the Confederacy on January 1, 1863. Because the Union did not control most areas of the Confederacy, there was no practical effect on the lives of slaves in those states. The document also did not affect slaves in border states or in states or areas of states under the control of the Union army. (Lincoln did not want to drive the border states into an alliance with the South.) In those areas, those who were enslaved would remain so. Therefore, the Emancipation Proclamation actually set no one free until Union troops managed to press deeper into the Confederacy over the ensuing years.

The importance of the Emancipation Proclamation was symbolic. It changed and broadened the goals of the Civil War. What had begun as a struggle to preserve the Union was now also a quest to free the slaves. In 1865, all the remaining enslaved African Americans were finally freed through the passage and ratification of the Thirteenth Amendment.

About The Second Industrial Revolution and the Growth of Cities

The Beginnings of Industrialization

The First and Second Industrial Revolutions had a tremendous impact on Europe and the United States from the 1700s well into the 1900s.

Before Industrialization

Prior to industrialization, the economies of Europe and the United States were mostly agrarian. Individuals and families produced most of their own food as well as the other goods that they needed to survive. What they could not produce or make themselves, they purchased from various craftspeople who engaged in small-scale, home-based manufacturing. Goods were produced using simple machines and various small tools. Over time, cottage industries emerged. Manufacturers provided employees with equipment and materials, while employees conducted the work within their own homes, affording them a measure of freedom.

The First and Second Industrial Revolutions

The First Industrial Revolution took place in Great Britain from the 1760s through the 1830s. During this time, technological developments—including increased use of iron and steel, utilization of new energy sources, improved transportation, and the invention of new machines such as the steam engine and cotton gin—revolutionized the economy and society of Great Britain. Improvements to farming technology made it possible for farmers to produce more food using fewer laborers. The reduced need for farm laborers, coupled with the rise of factories in urban areas, led many workers to seek employment in cities. Opportunities for skilled laborers and craftspeople declined, while demand for factory workers, including small children, grew.

The textile industry was one of the first industries in Great Britain to experience rapid industrialization. Invented in 1764, the hand-powered spinning jenny—a device that made it possible for a single person to spin multiple spools of thread at once—was one of the first machines that revolutionized textile production. Within the next two decades, other machines such as the power loom would further simplify the processes of spinning thread and weaving fabric, using water as the driving force instead of human muscle. This diminished the role played by small household producers in Great Britain.

As in Great Britain, the textile industry laid the groundwork for industrialization in the United States, thanks in part to Samuel Slater. Throughout the 1700s and early 1800s, the British government kept a

tight hold on the innovations and technologies that made industrialization possible, thus preventing industrial development in other countries and ensuring its own economic dominance. In 1789, however, Slater defied British law and sneaked out of the country, bringing his knowledge of textile manufacture to the United States. He helped design and erect the first successful American cotton mill in Pawtucket, Rhode Island.

Another important figure in American industrialization was Francis Cabot Lowell. Born in 1775 in Massachusetts, Lowell studied textile manufacturing in Scotland before returning to the United States. He founded his own textile mill at Waltham, Massachusetts, in 1814. At this mill, the whole process of turning cotton into cloth was undertaken, making this the first such location in the world. As in Slater's mill, Lowell's machines were powered by water.

Eventually, industrialization began to take hold outside of Great Britain. Other countries that experienced early industrialization were France, Belgium, and Germany. Still more countries caught up later. The United States and Japan industrialized rapidly throughout the late 1800s and into the 1900s, a period referred to as the Second Industrial Revolution. While Great Britain had once been the world's leading manufacturer, it was eventually outpaced by other European countries and the United States.

The Railroads and Industrialization

Improvements in transportation made industrialization of the United States possible. Throughout the early to mid-1800s, small, local railroad lines cropped up across the country. In 1862, Congress passed the Pacific Railway Act, authorizing the construction of the first transcontinental railroad. It was completed in 1869 and was followed by four additional transcontinental railroads that connected the East and West Coasts by 1900. During this time, the number of miles of railroad tracks grew exponentially, from a mere forty-five thousand miles (72,420 km) in 1871 to nearly two hundred thousand miles (321,868 km) by 1900.

Construction of the railroad network was undertaken largely by migrant laborers. Many of these laborers were immigrants from China. It is estimated that between ten thousand and fifteen thousand Chinese laborers, primarily young men, worked on the transcontinental railroad and that almost 90 percent of the western half of the railroad was built by Chinese laborers. These laborers had few rights or protections, and they were subjected to hostile treatment. Their work, also, was deadly; it is believed that between 150 and 2,000 Chinese workers died while working on the railroad. (This wide range of deaths is due to the fact that the Central Pacific Railroad did not keep track of workers who died.)

Railroads came to touch nearly every facet of American life, as consumers and producers alike depended on them for transportation. Railroads made travel faster and safer. At the same time, they opened new markets for businesses across the country, shipping goods from coast to coast and everywhere in between. Businesses that once dominated their small, local markets were forced to lower prices to remain competitive, a change that proved beneficial for consumers but made it difficult for smaller companies to compete. Meanwhile, larger companies with the resources to invest in equipment to mass-produce goods benefited from this shift.

Railroads facilitated industry in other ways, too. The railroads transported raw materials used in industrial production, such as coal and iron ore. They were also one of the largest consumers of raw materials. The growth of railroads thus led to growth in other industries, such as timber and coal. By the early 1900s, more than half a million miners across the country were extracting upwards of five hundred million tons of coal from the ground each year, large amounts of which were used to fuel the nation's trains or were delivered by trains directly to consumers. The railroad industry also proved to be a boon for the steel and oil industries.

Railroads did not always benefit consumers and businesses, however. Railroad owners monopolized local lines and charged travelers and businesses astronomical rates to use the railroads. In other instances, railroad owners colluded with one another to set high rates and split the profits.

The railroads, like other aspects of industrial development, imposed what economists call *negative externalities*. A negative externality is created when the actions of one party impose a cost on another party without the first party bearing the costs themselves. The lost lives of and injuries suffered by railroad workers are one example of a negative externality; another is noise and air pollution caused by the railroad or by factories; yet another is the businesses that were forced to close because of the success of the railroad.

Inventive People

Alexander Graham Bell

Alexander Graham Bell was born in 1847 in Edinburgh, Scotland. His mother was nearly deaf, and his father was a teacher to the deaf. His family relocated to London, and later to Canada. A year later, in 1871, Bell moved independently to Boston, where he began working at the Boston School for Deaf Mutes as a teacher. He later taught at the Clarke School for the Deaf and the American School for the Deaf.

Concurrent with his teaching, Bell designed new ways of transmitting telegraph messages. Bell's work with telegraphy attracted investors, though his interest in transmitting signals began to take a back seat to his desire to transmit voices. He submitted his patent for the telephone on February 14, 1876, just hours before Elisha Gray, a competitor, submitted paperwork intending to apply for his own patent for the same device. A patent is important because it gives an inventor the sole right to bring an invention to market and prevents others from selling copies. Bell was ultimately granted the patent over Gray, and on March 10, 1876, he successfully made the first telephone call, saying to his assistant in the next room, "Mr. Watson—come here—I want to see you." By August, Bell's telephone was able to successfully transmit its first long-distance call.

The Bell Telephone Company was established in July 1877, and Alexander Graham Bell served as a technology adviser. By the late 1880s, Bell had sold most of his shares in the company. He dedicated his remaining years to perfecting the phonograph, investigating ways to use light to transmit sounds, inventing new medical and surgical technologies, and studying aircraft design. He was also a founding member of the National Geographic Society.

Thomas Alva Edison

Thomas Alva Edison, the "Wizard of Menlo Park," was born in 1847 in Milan, Ohio. The youngest of seven children, Edison left school at age twelve to begin working on a railroad in Michigan. It was during this time that he was exposed to telegraphy. He would later travel around the country as a telegrapher during the Civil War. Compelled by his own hearing loss, Edison looked for ways to make operating telegraph machines easier for the hearing impaired.

Edison left telegraphy and became a full-time inventor in 1869, setting up a lab in Menlo Park, New Jersey, to pursue his many interests and creating new telegraphy products for companies such as Western Union. Edison's meticulous mind helped improve the telephone, and he also invented the phonograph.

In 1878, backed by J. P. Morgan and the Vanderbilt family, Edison established the Edison Electric Company and toiled for two years before discovering a filament that would sustain an electric current, in 1880. Within a year, Edison's electric light bulbs were being used at major international events, including the Paris Lighting Exposition. The Edison Electric Company became the General Electric Company in 1892 after its merger with a competing electric company.

Edison continued to invent through the remainder of his life, developing the first motion picture camera (the kinetograph) and a complementary viewing device (the kinetoscope).

George Washington Carver

George Washington Carver was born into slavery on the plantation of Moses Carver in Missouri in the early 1860s. At the age of about twelve, he pursued an education, all the while traveling and working odd jobs to support himself. He earned his high school diploma in Kansas, then went on to study art and piano at Simpson College in Iowa before studying agriculture at Iowa State Agricultural College, where he graduated with a master's degree in 1896. Next, he became the director of the new agriculture department at the Tuskegee Normal and Industrial Institute. Carver believed that education and economic development were key to advancing the interests of African Americans. His research centered on developing alternative crops for the South, including peanuts, soybeans, and sweet potatoes, to reduce the region's dependence on cotton production. He developed hundreds of products from both peanuts and sweet potatoes, including dyes, soaps, and glue. George Washington Carver received many accolades for his work and was esteemed by U.S. presidents, Thomas Edison, Henry Ford, and even Joseph Stalin.

The Wright Brothers

Wilbur (1867–1912) and Orville (1871–1948) Wright were inventors from the Midwest. They got their professional start as printers, gained renown for their high-quality printing presses, and opened a bicycle shop in 1892. These two successful businesses provided the funding for the Wright brothers' aeronautic work. Between 1899 and 1905, the brothers studied aviation and constructed a series of piloted and unpiloted biplane gliders. What the brothers were hoping to achieve was flight that was sustained (remaining in the air for a period of time) and powered (in which the aircraft had its own means of propulsion, such as an engine). They achieved their aims on December 17, 1903, with four flights lasting between twelve and fifty-nine seconds and traversing 120 to 852 feet (36 to 260 m). Between 1904 and 1905, the Wright brothers designed a plane that could stay aloft for approximately forty minutes. They sold an airplane to the U.S. Army in 1909 and established a factory and flight school the next year. Wilbur died of typhoid fever in 1912, but Orville continued with the Wright Company for three more years before selling his stake in 1915. Much of Orville's remaining life was spent defending his and Wilbur's legacy.

Henry Ford and Mass Production

Henry Ford was born on a farm in Michigan in 1863. He began working in machine shops in Detroit at age sixteen before working part-time for Westinghouse Engine Company. During this time, he began tinkering with steam engines and built a steam-powered tractor for use on local farms. He became chief engineer at Detroit Edison Company in 1893, a position that gave him time to build and experiment.

He finished his first working gasoline engine in 1893, and in 1896, he built his first automobile, which he called the Quadricycle. It took years for Ford's motorcars to attract widespread attention and investment. The Ford Motor Company made history in 1908 with the debut of the Model T.

Ford revolutionized transportation in the United States and around the world with his Model T, selling more than fifteen million vehicles in the car's nineteen-year existence. This was due in large part to Ford's adoption of the constantly moving assembly line, fed by components produced by subsidiary assembly lines on carefully coordinated schedules. Manufacture of the vehicles was broken into numerous discrete tasks, and one person performed the same task over and over. Ford introduced the eight-hour shift and ran his assembly line through three shifts per day (i.e., twenty-four hours a day). Soon, other industries adopted Ford's mass production model, making consumer goods available to the masses. Ford's business model relied on high volume and low prices; he insisted that the price of his product be low enough that the workers who made it could afford to buy it.

Access to the automobile fundamentally changed life in the United States, allowing people to travel more freely and encouraging the development of suburban areas. Although Ford was lauded for his adoption of a shorter workday and high wages, he also undermined unionization efforts and used intimidation tactics to keep his employees in line. Henry Ford died in 1947.

American Big Business and Monopolies

Andrew Carnegie

Andrew Carnegie was born in 1835 in Scotland. His family moved to present-day Pittsburgh, Pennsylvania, in 1848. He soon found a job as a bobbin boy in a textile mill, but he continued to devote himself to his studies in the evenings after work. Two years later, Carnegie began to work as a messenger in a telegraph office of the Pennsylvania Railroad Company. He was made the personal assistant and private telegrapher to the superintendent of the railroad's Pittsburgh branch in 1853. Within six years, Carnegie held the superintendent position of his former boss. He made numerous investments in various industrial enterprises during this time.

In 1872, Andrew Carnegie turned his attention to steel. Carnegie's mills were the first to use the Bessemer process, a method that reduced the cost, time, and labor needed to produce steel, thus making steel production more cost-effective than the previously used cast iron.

Carnegie also sought numerous other ways to improve the efficiency of his steel mills, including owning the raw materials and means of transportation integral to steel production. By 1890, the United States had begun producing more steel than Great Britain, largely thanks to Carnegie. Carnegie sold his steel company in 1901 to J. P. Morgan and dedicated the rest of his life to philanthropy.

John D. Rockefeller

John Davison Rockefeller was born in 1839 in New York, though his family moved several times during his youth before settling outside of Cleveland, Ohio, in 1853. During the 1860s, Rockefeller identified oil as an up-and-coming industry and began constructing refineries in Ohio.

In 1870, Rockefeller and other investors established the Standard Oil Company, a corporation and eventual trust that came to dominate the oil industry. Standard Oil's control of all of Cleveland's oil

refineries gave the trust unprecedented negotiating power, affording it the ability to influence railroad rates for shipping its product. Rockefeller and his business gained control of an entire level of the oil production chain by purchasing pipelines and refineries of its competitors outside Ohio. Standard Oil's owners further sought to control the oil industry by forming a trust. A trust allowed the stockholders of multiple companies to grant their shares to a board of trustees. The trustees were then capable of running multiple companies at the same time. Standard Oil was officially made a trust in 1881 and monopolized the oil industry within a year of the trust's inception. Over time, public backlash to Standard Oil's monopoly helped lead to the passage of the Sherman Antitrust Act. Ida Tarbell's muckraking reports on Standard Oil from 1902 to 1904 fueled additional government action against the trust, resulting in its dissolution in 1911.

Like Andrew Carnegie, Rockefeller became a major philanthropist in his later years, donating millions of dollars to both medical and educational institutions.

City Life

The New Colossus

The Statue of Liberty stands on Liberty Island in New York Harbor. It was conceived and constructed as a gift from France to the United States as a symbol of friendship between the two nations. The statue was completed in 1885, and it stands 151 feet (46 m) tall. The outside of the statue is formed from sheets of copper. Its characteristic green-blue color is caused by the formation of copper oxide, sometimes called verdigris. The statue, which stands on a specially constructed pedestal, was dedicated by President Grover Cleveland in 1886.

While the statue itself came from France, money for the pedestal on Liberty Island was raised by Americans. In 1883, a Jewish American poet named Emma Lazarus was asked to compose a sonnet in honor of the statue, to raise funds for the pedestal. Lazarus was strongly moved by the suffering of immigrants from Europe to the United States, especially Jewish migrants fleeing persecution and poverty. She was involved with relief efforts and advocated for the rights of these migrants. Her poem "The New Colossus," which is inscribed on the pedestal of the statue, is phrased as if it were Liberty herself calling upon the poor and oppressed of the world to come to the United States, to be free and to thrive.

Working Conditions and Unions

Industrialization brought significant changes to the United States and other countries around the world. While many benefited from new job opportunities and unprecedented access to consumer goods, the realities of industrialization were very different for those working in factories. Work was repetitive, hours were long, wages were low, and conditions were dangerous. Workers, including children, could expect to labor at the same task for up to sixteen hours a day. Women were paid half as much as men were for the same task, and children were paid even less. Workplace accidents were common, while pollutants produced by machinery diminished the workers' health.

Over time, unions formed to secure and defend the rights of workers. Trade unions represented the interests of distinct industries. National organizations like the National Labor Union, Knights of Labor, and American Federation of Labor, like trade unions, formed to demand safer working conditions, higher wages, and shorter workdays. The unions employed a variety of tactics, including strikes and boycotts, trying to compel business owners to meet their demands.

Tenements

As time went on, many people, including many immigrants, moved to cities seeking work. This increased demand for housing. Tenements helped answer this growing demand in major urban centers from the mid-1800s through the early 1900s. Former single-family homes were retrofitted and subdivided to accommodate multiple families. In some instances, buildings were expanded with additions on the tops and backs.

Most newly constructed tenements were five to seven stories tall, twenty-five feet (7.6 m) wide, and one hundred feet (30.5 m) deep. To maximize space, buildings were built as close together as possible, resulting in limited air circulation and no natural light. The buildings were built quickly and inexpensively, with poor or no plumbing and, in many instances, no fire escapes. Tenements facilitated the rapid spread of disease, as in 1849, when some five thousand people died from cholera in New York City. Tenements were also susceptible to fire, as evidenced by the 1871 Great Chicago Fire, which destroyed more than three square miles (8.5 sq km) of the city and left one hundred thousand people homeless.

There were some early efforts to regulate tenements in the late 1860s, including the New York State Tenement House Act, which required buildings to have a minimum of one toilet for every twenty occupants. However, these laws generally went unenforced. It was not until after 1890, when Jacob Riis published *How the Other Half Lives*, that true reform took place. Riis's book depicted the ghastly conditions of America's inner-city poor, calling attention to the cramped and unsanitary living conditions and the shockingly high infant mortality rate. New York State's Tenement House Law of 1901 worked to rectify unsafe and unsanitary conditions and prevent them from happening in the future. New building codes were issued, and existing tenement buildings were modified to meet the new codes.

City Sanitation

Few cities had a worse reputation for sanitation than New York during the 1800s. Poor plumbing, limited waste removal, and cramped housing meant that refuse was generally dumped out of windows and onto the streets, or into nearby rivers or the ocean. It was not until 1881 that the city made a concerted effort to improve conditions with the creation of the Department of Street Cleaning. Unfortunately, the agency was extremely corrupt and largely ineffective. In 1895, George E. Waring Jr., a former Civil War general, assumed the position of commissioner and introduced innovations, including scheduled garbage collection days, street sweeping, and a garbage-sorting process to reuse or repurpose as much refuse as possible. Waring's efforts proved so transformative within just a year that his sanitation workers were cheered enthusiastically by city residents during a parade for the agency in 1896. Despite Waring's best efforts, however, the city continued dumping garbage into the ocean until 1934.

About Theodore Roosevelt and the Conservation Movement

Theodore Roosevelt

Early Life and Career

Theodore Roosevelt was born on October 27, 1858, to a wealthy New York family. Despite struggling with asthma and chronic illness as a child, he worked hard to build up his body through weight training and other vigorous activities, turning himself into a robust figure. He was educated by private tutors as a child and entered Harvard University in 1876.

Roosevelt briefly attended Columbia Law School before winning election to the New York State legislature in 1881. He and his first wife, Alice Hathaway Lee, had their first child in February 1884, but Alice died two days later. In a terrible coincidence, Roosevelt's mother died of unrelated causes that same day. Bereft, Roosevelt moved to the Dakota Territory to become a rancher. The blizzards of 1885–86 wiped out most of his cattle, and he sold his ranch and moved back to New York, where he resumed his interest in politics. In 1886, Roosevelt married Edith Kermit Carow, with whom he had five more children.

Roosevelt was appointed to the U.S. Civil Service Commission in 1889, where he served until becoming president of the New York Police Board in 1895. By this time, he was known for his honesty and intolerance for corruption, inspiring President William McKinley to appoint him assistant secretary of the navy in 1897. However, Roosevelt resigned at the outbreak of the Spanish-American War in favor of military service. He led a regiment of volunteer cavalry called the Rough Riders during battles in Cuba. He returned to the United States a war hero.

Roosevelt ran on a Republican ticket for governor of New York and won, though his tenure in the position was short-lived. Republican party bosses, frustrated by Roosevelt's strict adherence to the law and distaste for the patronage system, sent him to the national stage as William McKinley's running mate. McKinley was re-elected president in 1900, and Roosevelt became vice president. When McKinley was assassinated in September 1901, Theodore Roosevelt became the twenty-sixth president of the United States.

The Conservationist President

Roosevelt never lost his love for the beauty of the West. He was a naturalist and an environmentalist long before these terms were commonly used. During his time in public office, he championed conservation of the nation's natural resources. One way he did this was through the American

Antiquities Act of 1906. The act allowed the federal government to designate and protect archaeological and cultural sites on public lands. It also empowered the president to designate national monuments. Roosevelt used the act to create eighteen national monuments. Since then, presidents have used it more than 150 times.

Under Roosevelt's administration, more than two hundred million acres (eighty-one million hectares) of public land were withdrawn from sale and became part of the national forest. In 1905, Roosevelt created the National Forest Service, and in 1906, he signed the Yosemite Recession Bill, which placed Yosemite National Park under federal control. He persuaded Congress to set aside money to establish irrigation projects and to set up the Inland Waterways Commission to conserve and develop the nation's lakes, rivers, and canals. Roosevelt was also responsible for the creation of dozens of wildlife sanctuaries and five national parks.

One story about Roosevelt that has become a legend is that he and some of his aides went hunting with a group of reporters, who were along to cover the story. After many hours, the president had not shot anything. His aides found a bear and tied it to a tree for the president to shoot, but Roosevelt refused to kill the confused and frightened animal. Members of the press relayed this story back to their papers. A Brooklyn store owner saw a cartoon of the incident and made a stuffed bear for his store window. He posted a sign alongside it that read "Teddy's bear." Thus, the "teddy bear" was born.

About Women's Suffrage

Reformers

The Grimké Sisters

Having been exposed to the cruelty of slavery from childhood, sisters Sarah and Angelina Grimké grew up with a disdain for the practice. Their father, a judge, sometimes made his children work in the fields alongside enslaved people. This resulted in the girls seeing their suffering up close, and the girls grew up with a shared desire to fight for social justice. Even among those who rejected slavery, the sisters, marginalized in the movement because they were women, came to be considered radical abolitionists.

The sisters' work toward abolition eventually led them to champion women's rights. They realized that they could not bring about any lasting change regarding the end of slavery if they did not have a voice in their government. Although they are often referenced together, Angelina is especially known for her oratory skills and her abolition work, while Sarah's work for women's rights influenced the movement and what occurred later in Seneca Falls. For the Grimké sisters, the oppression of women and the oppression of enslaved people were closely connected.

Elizabeth Cady Stanton and Susan B. Anthony

The struggle for women's rights picked up steam in 1848 when Elizabeth Cady Stanton and Lucretia Mott organized the first women's rights convention in Seneca Falls, New York, after they had been denied official recognition at an international antislavery convention in London. At that time, women had very limited public roles. They usually could attend meetings, but they were not often allowed to speak in public. Women were, for the most part, not allowed to enter professions such as medicine or law. Few girls were educated past eighth grade (though it is important to note that a large percentage of boys were uneducated too). With the onset of the Industrial Revolution and more employment opportunities for women, they began to demand more of a say, especially because at the time, married women could not own property. If women had property in their names before they were married, they had to turn it over to their husbands after marriage. For working women who made their own income, this was an injustice. Women could neither vote nor hold public office.

Women such as Elizabeth Cady Stanton, Susan B. Anthony, and Lucretia Mott, who were educated and not intimidated by the strictures of society, set out to do something about their circumstances. During the 1850s, many women supported the abolition of slavery. Once the Civil War was over and slavery was abolished, they expected abolitionists to support their cause. However, few male abolitionists returned the favor. As states debated the Fourteenth and Fifteenth Amendments, Susan B. Anthony spoke against both, critical of the fact that they did not specifically enfranchise women. In 1869, when the Fifteenth Amendment—which gave African American men the right to vote—was proposed, Anthony

and Stanton founded the National Woman Suffrage Association (NWSA) to protest the amendment because it did not include women. In response to the proposed amendment, Anthony famously said, "I will cut off this right arm of mine before I will ever work for or demand the ballot for the Negro and not the woman." The amendment was ratified nonetheless.

Anthony continued to be one of the prominent leaders of the women's rights movement until her death in 1906. Although she did not live to see the passage and ratification of the Nineteenth Amendment in 1920, which gave women the vote, she was instrumental in gaining support for the amendment. Throughout the last part of the 1800s, Anthony crisscrossed the country speaking for women's suffrage and helped women gain the vote in state and local elections in California, Michigan, and Colorado. In 1892, she became president of the National American Woman Suffrage Association, an organization that combined the NWSA and a rival group. She held this post until 1900.

One of the most notable episodes in the long, busy life of Susan B. Anthony began on November 1, 1872, when Anthony and several other women marched into a New York barbershop where voters were registered and demanded to be added to the registration lists. When the registrars tried to stop the women from registering, Anthony read them the Fourteenth Amendment:

> *All persons born or naturalized in the United States, and subject to the jurisdiction thereof, are citizens of the United States and of the State wherein they reside. No State shall make or enforce any law which shall abridge the privileges or immunities of citizens of the United States; nor shall any State . . . deny to any person within its jurisdiction the equal protection of the laws.*

Anthony reasoned that "privileges" must include voting, and she pointed out that the amendment did not state that the privileges were restricted to men. Still, the registrars hesitated. Anthony threatened to bring charges against them. At last, they grudgingly allowed the women to register, and on November 5, Anthony and fifteen other women cast their ballots. (Anthony voted for former Civil War general Ulysses S. Grant, among others.) Sometime later, Anthony was arrested and indicted. This created a national uproar. Anthony spent the months leading up to her trial speaking in one local town after another. Her topic was "Is It a Crime for a Citizen of the United States to Vote?" During the speeches, she spoke for women's suffrage and urged potential jury members to acquit her. The judge in the trial was opposed to women's suffrage and seems to have written his opinion against Anthony before the trial even started. He refused to let Anthony testify and ordered the jury to find her guilty. Before sentencing, the judge asked if Anthony had anything to say. Her words stunned the many observers in the court:

> *Yes, your honor, I have many things to say; for in your ordered verdict of guilty, you have trampled under foot every vital principle of our government. My natural rights, my civil rights, my political rights, my judicial rights, are all alike ignored. Robbed of the fundamental privilege of citizenship, I am degraded from the status of a citizen to that of a subject; and not only myself individually, but all of my sex, are, by your honor's verdict, doomed to political subjection under this, so-called, form of government.*

The judge tried several times to silence Anthony, but she continued to speak in protest. Finally, he got her to sit down and sentenced her to pay a fine of one hundred dollars. Anthony declared she would never pay:

> *May it please your honor, I shall never pay a dollar of your unjust penalty. All the stock in trade I possess is a $10,000 debt, incurred by publishing my paper . . . the sole object of which was to educate all women to do precisely as I have done, rebel against your manmade, unjust, unconstitutional forms of law, that tax, fine, imprison and hang women, while they deny them the right of representation in the government; and*

I shall work on with might and main to pay every dollar of that honest debt, but not a penny shall go to this unjust claim. And I shall earnestly and persistently continue to urge all women to the practical recognition of the old revolutionary maxim, that "resistance to tyranny is obedience to God."

Anthony went to her grave with the fine unpaid.

Sojourner Truth

Another woman active in both abolition and women's rights was Sojourner Truth. Born into slavery in New York State and given the name Isabella, she emancipated herself in 1826. She later changed her name to Sojourner Truth, reflecting her quest for truth and justice, and became an itinerant preacher. Adopting first abolition and later women's rights, Truth took to the lecture circuit. Her fame spread with the publication of *The Narrative of Sojourner Truth* in 1850. During the Civil War, Truth worked to gain admission of African American units into the Union army. After the war, she worked for a time with former slaves to help them make the transition to freedom, and she continued to advocate for women's rights.

An eloquent speaker who created great emotion in her audiences, she is often credited with the speech "Ain't I a Woman?" However, it is possible that she never actually spoke the words as they were written. There were no recordings at that time, of course, and it is possible that another woman, Frances Dana Gage, embroidered Truth's speech for publication. Regardless, those words became almost an anthem for women's rights advocates.

Alice Paul and Women's Suffrage

After the Fourteenth and Fifteenth Amendments passed without enfranchising women, women's suffrage activists turned their full attention to securing the right to vote. In the late 1800s, two existing suffrage groups merged to create the National American Woman Suffrage Association (NAWSA). The group focused on garnering enough support for women's suffrage in state legislatures to influence the ratification of an amendment to the Constitution. To achieve this end, NAWSA campaigned for the support of upper-class, educated, and influential members of society, a move that alienated not only African American and poor women but also more radical members of the suffrage movement.

When NAWSA's strategy had failed to make any legal headway by 1910, an associated organization called the Congressional Union for Woman Suffrage fought for a federal strategy instead of a state-by-state strategy. Led by Alice Paul and Lucy Burns, this group eventually left NAWSA to form the National Woman's Party (NWP) and focus on more militant means of direct action. After the split, NAWSA leader Carrie Chapman Catt changed course to follow a strategy of direct action by members to create support for a federal amendment. This strategy included pressuring President Woodrow Wilson to push for a women's suffrage amendment.

The NWP employed even more militant strategies, including marches, protests, and civil disobedience. In an attempt to pressure President Wilson, the NWP staged multiple protests in front of the White House in 1916 and 1917. However, the United States' entrance into World War I resulted in a crackdown on demonstrations. Police arrested hundreds of women's suffrage picketers throughout the summer of 1917 and threatened months-long jail sentences. Undeterred, Alice Paul continued to lead protests outside the White House and, consequently, suffered several arrests for her activism.

By 1918, the tide was turning in favor of a constitutional amendment for women's suffrage. In 1919, the Nineteenth Amendment passed both houses of Congress and was sent to the states for ratification. In 1920, Tennessee voted narrowly to ratify the amendment. It was the thirty-sixth state to do so, giving the amendment the two-thirds majority needed to become part of the Constitution.

Mabel Ping-Hua Lee

Although American women won the right to vote in 1920, many Chinese immigrants were unable to cast their votes in elections for another two decades. This was the result of the Chinese Exclusion Act, a federal law that not only limited Chinese immigration but also prevented immigrants from becoming citizens. One Chinese immigrant, Mabel Ping-Hua Lee, could not become a citizen, and therefore could not vote. Lee became a strong advocate for women's suffrage, even though she knew she would not benefit from a law that allowed women to vote. Lee began attending Barnard College at only sixteen years old. As part of her advocacy work, she organized a march for a delegation of Chinese American women in May of 1912. The demonstration took place in New York City, and Lee led the march on horseback. The Chinese Exclusion Act was repealed in 1943, while Lee was still alive, but it is not known whether she ever cast a vote in an election.

About The Civil Rights Movement

Opposing Segregation

Segregation was a system of legal racialized discrimination in parts of the United States that was codified after the end of Reconstruction in 1877 and lasted until the 1960s. In 1896, the Supreme Court ruled in *Plessy v. Ferguson* that segregated "separate but equal" services and facilities were constitutional. The term "Jim Crow" became synonymous with segregation laws of this era. The name itself originates from a minstrel show from the late 1820s called *Jump Jim Crow*. Under Jim Crow, African Americans were systematically denied access to employment, public facilities, housing, education, and many other opportunities available to white people. While segregation was entrenched in state and local laws and customs, it was continually reinforced by acts of violence and terrorism.

In the middle of the twentieth century, events and individuals began to break down barriers and attitudes held in the Jim Crow era. During World War II, African Americans served in the military and in the defense industry. Segregation was directly challenged through several pathways, and the legality of the system began to disintegrate.

A notable community-led local breakthrough occurred in 1953, when Rev. T. J. Jemison and others organized the African American community in Baton Rouge, Louisiana, to boycott the city bus system for eight days. In response to a proposed fare increase, this young leader presented the city council with the argument that it unfairly impacted African American riders. He argued that Black people were the majority of the passengers on the buses, and they were not allowed to sit when seats reserved for white people remained empty. The city council did indeed change the law, mandating that African American riders on city buses were to get more seats if they were the majority of passengers, but drivers did not act accordingly and continued to reserve a majority of seats for white passengers. When a Black woman named Martha White sat in a whites-only seat, the bus driver had her removed from the bus. In response, the United Defense League, a community organization led by Rev. Jemison, organized the African American community to completely boycott the bus system the next day. People arranged carpools or walked where they needed to go. Four days later, the manager of the bus company admitted how successful the tactic was in the local media. By the end of the eighth day of the boycott, a new agreement was reached where fewer whites-only seats would remain on city buses. Rev. Jemison went on to share his tactics with Rev. Martin Luther King Jr. a few years later.

The next year brought the Supreme Court's ruling in *Brown v. Board of Education* (1954), which declared racial segregation in public schools to be unconstitutional because it violated the Fourteenth Amendment. The ruling faced backlash throughout the South. The state of Arkansas attempted to stop the integration of Central High School in Little Rock, and Alabama governor George Wallace vowed to keep his state's schools segregated.

In 1955, a fifteen-year-old African American girl, Claudette Colvin, kept her seat on a crowded, segregated bus in Montgomery, Alabama, rather than give it up to a white passenger. Later that

same year, adult Rosa Parks made the same decision, sparking the Montgomery bus boycott, which ultimately led to a Supreme Court finding that such segregation was unconstitutional. These victories were often offset by tragedies, such as the 1955 lynching of fourteen-year-old Emmett Till in Money, Mississippi, who was accused of offending a white woman.

In 1960, four African American college students in Greensboro, North Carolina, sat at a segregated Woolworth's department store lunch counter and politely asked for coffee. Soon, the sit-in movement spread across the South. In Louisiana, sit-in participants were convicted of disturbing the peace. They brought their case to the Supreme Court, arguing that there was no evidence of guilt and they were denied due process of the law. The Supreme Court heard the case, known as *Garner v. Louisiana*, in 1961. The court ruled that the Fourteenth Amendment's due process clause does not allow a state to apply criminal statutes about disturbing the peace to nonviolent protestors staging a sit-in to express opposition to segregation. Most stores then chose to desegregate. In 1961, interracial groups of Freedom Riders rode interstate buses into a South that was still very segregated. The riders wanted to test the enforcement of the 1960 *Boynton v. Virginia* decision that banned segregation in facilities associated with interstate travel, like bus terminals. Although they were met in Alabama and other places with violence, their actions encouraged President John F. Kennedy to devote federal resources to enforcing the desegregation ban. Their actions succeeded in desegregating public transportation in the South.

Jackie Robinson

On April 15, 1947, Jackie Robinson put on a Brooklyn Dodgers uniform, walked to the plate in Ebbets Field, struck the batter's pose, and waited for the pitch. These simple actions broke the color barrier in Major League Baseball. Robinson was African American, and up until then, baseball had been segregated. Any African American athlete who wanted to play professional baseball had to play in separate Negro leagues.

Raised in California, Robinson was a standout athlete at Pasadena Junior College and UCLA. He was on the football, basketball, baseball, and track teams in college. Robinson served as an officer in the army during World War II. After the war, he began playing professional baseball in the Negro leagues, where Branch Rickey, the president and general manager of the Brooklyn Dodgers, discovered him.

Rickey thought Robinson's skills and temperament might allow him to break the color barrier in Major League Baseball. Before allowing him to play for the Dodgers, Rickey had deliberately tested Robinson's nerves by shouting insults at him. Rickey wanted to see if Robinson could hear the kind of insults and taunts he was sure to receive from bigoted fans without losing his cool. In October 1945, Rickey offered Robinson a contract to play on a Dodgers farm team, the Montreal Royals of the International League. Robinson played well for the Montreal Royals and had the best batting average in 1946. In 1947, he earned a spot playing for the Dodgers in the major league. Robinson faced tremendous abuse during his first months. Fans yelled insults and threw bottles when he played. Some even called in death threats. Players on other teams deliberately threw balls at his head and spiked him with their cleats when they slid into bases. Some of his own teammates were supportive and friendly, but others complained about having to play with an African American player. Because of Jim Crow laws in the South, Robinson was not allowed to stay in the same hotel or eat in the same restaurant as his teammates. Despite all of these hardships, Robinson kept his cool. He later said, "Plenty of times

I wanted to haul off when somebody insulted me for the color of my skin, but I had to hold to myself. I knew I was kind of an experiment. The whole thing was bigger than me."

But Robinson not only endured, he ultimately prevailed. It helped that he was an excellent player. He led the National League in stolen bases during his rookie season and was named Rookie of the Year. In 1949, he hit a league-leading .342 and was selected as the league's most valuable player (MVP). He went on to lead Brooklyn to six league championships and a World Series triumph. In 1962, Jackie Robinson became the first African American player named to the Baseball Hall of Fame. Major League Baseball retired his number (42) in 1997, the fiftieth anniversary of his debut. Later athletes who benefited from Robinson breaking the color barrier included not only African American but also Latino and Asian players—none of whom could have played before Robinson stepped up for that first at bat.

Rosa Parks

Rosa Parks was born and raised in Alabama. She joined the National Association for the Advancement of Colored People (NAACP) in 1943 after she moved to Montgomery. As secretary of the Montgomery chapter, she was actively involved in its work. She became the adviser of the NAACP Youth Council in 1949, where she worked on desegregating local public schools and led young people in resisting Jim Crow laws with such acts as patronizing whites-only libraries.

In 1955, Parks traveled to the Highlander Folk School, in Monteagle, Tennessee. The school was rare in its integrated meeting space, and it became a leadership incubator for civil rights activists. Highlander taught its African American students their rights as citizens, and many leaders emerged from those who attended the meetings. Parks attended a session titled "Racial Desegregation: Implementing the Supreme Court Decision."

On her way home from her job on the night of December 1, 1955, Parks took a seat in the first row of the "colored" section of a Montgomery bus. Buses, trains, restaurants, and movie theaters—all public places and means of transportation—were segregated in the South. As the bus became crowded, the driver ordered Parks to give up her seat to a white man. She refused. In her autobiography, Parks noted that she was neither old nor tired in the conventional sense that night. She was only forty-two years old, but she noted that she was "tired of giving in." Parks was arrested and later fined ten dollars, which she did not pay.

While Parks was not the first person in Montgomery to resist bus segregation, the organizers of the NAACP believed that she would be a better face of a boycott than earlier people who were similarly arrested, such as fifteen-year-old Claudette Colvin or eighteen-year-old Mary Louise Smith. Colvin became pregnant after her incident on the bus, and organizers were concerned that her appearance as a pregnant teenager would take attention away from the real issue at hand. Parks, on the other hand, was an adult with what Colvin later called "the right look . . . the kind that people associate with the middle class."

Parks leveraged her connections with local leaders of the NAACP and others within the African American community, and they laid out a plan to boycott Montgomery buses. An organization called the Montgomery Improvement Association was set up, and a young clergyman, Dr. Martin Luther King Jr., was elected to lead it. Some 75 percent of the city's bus ridership was African American, and even though most did not own cars, they observed the boycott for 382 days. Parks became a dispatcher, arranging rides for people who were boycotting the buses, and spoke publicly to raise money for the Montgomery Improvement Association.

The U.S. Supreme Court handed down a ruling in late 1956 that segregation on Alabama buses was unconstitutional. The Montgomery bus companies began rolling again without "colored" sections.

For Parks, her actions made her the target of harassment, including death threats, and she lost her job. She and her husband moved to Virginia and then Detroit. She brought her deep knowledge of organizing against segregation with her and became involved in Detroit's Civil Rights Movement in the 1960s and 1970s, including working in the office of Michigan congressman John Conyers Jr. She continued to work with the NAACP throughout her life and was awarded the Presidential Medal of Freedom in 1996.

The Civil Rights Movement would continue through the 1950s and 1960s, but many people feel that it got its start when Rosa Parks refused to move to the back of the bus. For her simple refusal to comply with a law that she viewed as unjust, Rosa Parks has become a hero to many.

Ruby Bridges

Ruby Bridges was born in Mississippi in 1954 as the oldest of five children in her family. Her parents moved to New Orleans two years later. She attended a segregated school for kindergarten in 1959. As part of the federal mandate to integrate schools after the *Brown v. Board of Education* ruling, the New Orleans school district instituted an exam for African American children who wanted to attend all-white schools. Bridges was one of six children who passed the exam. Her parents carefully considered the costs and benefits of allowing Bridges to attend William Frantz Elementary School and decided to send the six-year-old to first grade at the previously all-white school.

Bridges ended up as the only African American child at the school that first year, in 1960. She was accompanied by federal marshals as she walked through angry crowds each day to enter the building. Bridges recalls not knowing why people were yelling at her. Her parents had not told her that she was going to an all-white school. The first day, she had to remain in the principal's office the whole day while angry white parents entered the school building to take their children home. The next day, a teacher named Barbara Henry taught her in a classroom alone. She was the only teacher willing to teach Bridges. The pair worked together in that classroom for the remainder of the year.

Bridges and her family were the subjects of both intense support and protest. While some northern supporters sent monetary gifts to her family, her father Abon lost his job and her grandparents lost their livelihood as sharecroppers. Grocery stores refused to serve her mother. Norman Rockwell famously painted Bridges walking into school attended by the U.S. marshals. He titled his 1963 painting *The Problem We All Live With*.

The next year, more African American students enrolled in the school alongside Bridges, and eventually she graduated from a fully desegregated high school. Bridges continues to speak out about her experiences and has created a foundation focused on creating change through education.

Martin Luther King Jr.

One of the people who came to national prominence as a result of the Montgomery bus boycott was Dr. Martin Luther King Jr. He was the young pastor of the Dexter Avenue Baptist Church in Montgomery, Alabama. Both his father and his grandfather were ministers, and both had worked for equal rights for

African American people. King supported Rosa Parks and the Montgomery bus boycott and continued to do so even when his home was dynamited and his family threatened. When desegregation of the buses was achieved, it was a victory not only for the African American community but also for the young pastor.

Following Montgomery, the movement for civil rights soon engulfed the South. A forceful and eloquent speaker, King became the central figure in the Civil Rights Movement that took shape in the mid-1950s after the bus boycott. With nearly one hundred other religious leaders, King founded the Southern Christian Leadership Conference (SCLC) in 1957. Influenced by the writings and model of Mahatma (Mohandas) Gandhi and his movement in India, King and the SCLC dedicated themselves to change through civil disobedience and nonviolence. They were never to lash out at their attackers but to accept violence—even beatings—without hitting back.

King and his followers demonstrated their belief in this philosophy on many occasions. One of the most egregious shows of force by segregationists occurred in Birmingham, Alabama, in 1963, when white policemen unleashed attack dogs and pointed fire hoses at nonviolent civil rights demonstrators. King was thrown in jail along with many demonstrators, including several hundred schoolchildren. The events were widely televised and tipped many who had previously hesitated toward support for the Civil Rights Movement. The images and footage of violence shocked people and showed the reality of what segregation meant and the lengths its defenders would go to.

While in jail, King wrote his famous "Letter from Birmingham Jail," in which he explained his goals and also argued that while just laws must be obeyed, unjust laws, including segregation laws, need not be. The letter, available in many books and on numerous websites, is considered one of King's most powerful works.

In August 1963, King led more than two hundred thousand people in the March on Washington to pressure the government into passing the Civil Rights Act of 1964. In front of the Lincoln Memorial, King delivered his extraordinary "I Have a Dream" speech, in which he looked forward hopefully to a world without segregation, a world in which people would be judged "not . . . by the color of their skin but by the content of their character." The last few lines are among the most famous in American oratory:

> *When we let freedom ring—when we let it ring from every village and every hamlet, from every state and every city, we will be able to speed up that day when all of God's children, Black men and white men, Jews and Gentiles, Protestants and Catholics, will be able to join hands and sing in the words of the old Negro spiritual, "Free at last! Free at last! Thank God Almighty, we are free at last!"*

In 1964, King was awarded the prestigious Nobel Peace Prize for his work toward racial equality.

Continuous activism kept the momentum of the Civil Rights Movement going. The 1965 Selma to Montgomery March was actually a series of three marches, organized to protest injustice in Alabama and other states where African Americans had been denied the right to vote. Dr. Martin Luther King Jr. and the SCLC chose Selma, Alabama, for an African American voter registration campaign. On March 7, unarmed protestors attempting to cross the Edmund Pettus Bridge were met by white segregationists and by police, who used whips, nightsticks, and tear gas. On this march, which came to be known as "Bloody Sunday," at least fifty protestors required hospital treatment. Dr. King led a second march two days later, but it, too, was met by police who refused to let them over the bridge. King led the marchers in prayer before turning them around. Before the third march, which occurred on March 21, President Lyndon B. Johnson asked Congress for federal voting rights legislation. The president also mobilized almost four thousand soldiers to protect the marchers along the way for this third and final Selma to Montgomery March.

Dr. King was assassinated in 1968 by a white segregationist. In 1983, the U.S. Congress designated the third Monday in January as a federal holiday in King's honor.

Landmark Legislation

Continuous activism and changing attitudes eventually produced political pressure to make nationwide changes. Two landmark pieces of legislation were enacted in the mid-1960s. The Civil Rights Act of 1964 forbade discrimination on the basis of race, color, religion, sex, or national origin, especially in public accommodations and federally funded programs. It also strengthened voting rights enforcement and school desegregation.

The Voting Rights Act of 1965 banned literacy tests as a requirement for voting, mandated federal oversight of voter registration in areas where tests had previously been used, and gave the U.S. attorney general the duty to challenge poll taxes for state and local elections. It also granted federal oversight of voter registration in areas where less than 50 percent of the non-white population had registered to vote. While this did not end discrimination at the polls, it did greatly improve voter turnout among African Americans.

About The Space Race

Early Flight

Humans have been enamored with flight for centuries. Well before the Wright brothers took their historic first flight, people were trying to conquer the skies.

First Flying Machines

The Italian Renaissance was a time of thinking and discovery. It was also a time of dreaming. One of the greatest thinkers of the time was artist and inventor Leonardo Da Vinci. Leonardo was fascinated by flight and made many observations of birds and how they fly. Around the year 1500 CE, he sketched a design for a flying machine that resembled a modern helicopter. While Leonardo's machine was never able to take flight, it would influence the design of many flying machines to come.

Other early inventors experimented with models that resembled balloons or gliders. These early designs did not have a mechanical engine. Instead, they were powered by humans—usually via a contraption resembling a bicycle. Eventually, inventions such as Alberto Santos-Dumont's airship No. 6 helped bridge the gap from human-powered machines to machines that could fly on their own. On October 19, 1901, Santos-Dumont's machine, which resembled a modern blimp, flew from the Parisian suburb of Saint Cloud to the Eiffel Tower and back in under an hour.

The Wright Brothers

Wilbur (1867–1912) and Orville (1871–1948) Wright were inventors from the Midwest. They got their professional start as printers and gained renown for their high-quality printing presses, then opened a bicycle shop in 1892. These two successful businesses provided the funding for the Wright brothers' aeronautic work. Between 1899 and 1905, the brothers studied aviation and constructed a series of piloted and unpiloted biplane gliders. What the brothers were hoping to achieve was flight that was sustained (remaining in the air for a period of time) and powered (in which the aircraft had its own means of propulsion, such as an engine). They achieved their aims on December 17, 1903, with four flights lasting between twelve and fifty-nine seconds and traversing 120 to 852 feet (36 to 260 meters). Between 1904 and 1905, the Wright brothers designed a plane that could stay aloft for approximately forty minutes. They sold their first airplane to the U.S. Army in 1909 and established a factory and flight school the next year. Wilbur died of typhoid fever in 1912, but Orville continued with the Wright Company until he sold his stake in 1915. Much of Orville's remaining life was spent defending his and Wilbur's legacy.

The Development of Airplanes

As soon as the Wright brothers demonstrated that air flight was possible in 1903, the technology advanced significantly. Importantly, the Wright brothers' aircraft did not attempt to emulate a bird's wings like those of other inventors. Instead, they built on the research of great thinkers such as Galileo

Galilei and Isaac Newton, as well as Leonardo da Vinci, focusing on issues such as resistance and the drag of air currents.

Later engineers also studied the works of mathematicians Daniel Bernoulli and Leonard Euler and engineer John Smeaton to understand the relationship between pressure and velocity. Scientists and engineers in the aerospace field now know that there are four forces that help an airplane take off and stay in the air:

1. Thrust: the force that moves an aircraft in the direction it is going. Air is pulled in and then pushed out in the opposite direction. In early planes, thrust was created by a propeller. Modern aircraft rely on jet engines for thrust. Household fans also create the same effect.
2. Drag: the force that acts in the opposite direction of movement, causing an object to slow down. Drag is caused by friction and differences in air pressure. When you put your hand out the window of a moving car and feel it move up or down, you are experiencing drag.
3. Weight: the force caused by gravity.
4. Lift: the force that holds an aircraft in the air. The wings of an airplane create the lift that it needs.

Once powered flight had been achieved, the focus shifted to developing more powerful and efficient engines. Advancements in technology took aviation from propeller-driven and piston-engine aircraft to gas-filled airships to jet-engine-powered airliners with pressurized cabins. By the late twentieth century, jet-powered planes had become the new standard, revolutionizing air travel, military operations, and global connectivity.

The Space Race

After World War II, the United States and the Soviet Union competed to prove their military superiority over each other in the Cold War. This rivalry extended to rocketry and space exploration. The Space Race caused the United States and the Soviet Union to develop new and better technologies. The result was a chase for prestige and power that ultimately extended to other countries.

A Rivalry at Work

Americans were shocked when the Soviets launched the first artificial satellite, *Sputnik I*, in October 1957. The United States responded by launching its own satellite, *Explorer 1*, in 1958. That same year, the National Aeronautics and Space Administration (NASA) was founded to advance U.S. space technology. Soviet leader Nikita Khrushchev used his country's success in space as a tool of propaganda. He pointed to the Soviet Union's *Sputnik* satellite as evidence of the country's superior technological power—and, by extension, the superiority of communism.

American president Dwight D. Eisenhower made a conscious decision not to engage with Soviet claims of superiority. However, his successor, John F. Kennedy, made a different decision. When Soviet cosmonaut Yuri Gagarin became the first human in space in 1961, Kennedy asked his advisers to recommend a "space program which promises dramatic results in which we could win." Three weeks later, Alan Shepherd became the first American in space. In 1962, President Kennedy pledged to send a person to the moon by the end of the decade. Thousands of brilliant scientists and mathematicians went to work. As a vital part of this work, NASA employed many women, including nearly eighty African

American women, as "human computers" to manually perform the complex calculations that made space travel possible. American success in the Space Race rested on the contributions of these women. This story was popularized by the book *Hidden Figures* by Margot Lee Shetterly and the 2016 movie of the same name.

The United States spent the rest of the 1960s working toward President Kennedy's goal of sending an American astronaut to Earth's moon. Remarkably, this goal was achieved, and then surpassed. After the successful *Apollo 11* mission of 1969, in which astronauts Neil Armstrong and Buzz Aldrin became the first people to walk on the moon, five other missions safely reached the moon. From 1969 to 1972, a total of twelve people walked on the moon. In the 1970s and 1980s, space exploration moved away from moon missions and toward the space shuttle program. Whereas each of the Apollo missions took astronauts to the moon and returned a few days later, the space shuttle was a transportation system, carrying astronauts and cargo back and forth from Earth to its orbit.

The race for both technological dominance and national superiority continued until the Soviet Union collapsed in 1991. The result of the Space Race was a major improvement to both countries' space programs, as well as a series of scientific breakthroughs that would benefit the rest of the world as well. These breakthroughs included consumer products such as wireless headsets, LED lighting, memory foam, and scratch-resistant eyeglass lenses. The Global Positioning System (GPS) was also invented during the Space Race era, as were infrared ear thermometers and technologies to keep food safe, such as disinfectants and refrigeration systems.

The Modern Space Program

Modern countries are no longer tied up in a race to dominate space. Instead, they have found innovative ways to work together, still due in large part to the developments that were made during the Space Race. Improved technology has also allowed for private companies to pursue their own visits to space.

International Cooperation

The first hints of international collaboration in space date back to April 19, 1971, when the Soviet Union launched a spacecraft that would go on to become one of the core segments of the International Space Station nearly thirty years later.

In July 1975, the Soviet Union and the United States launched the first cooperative space mission when the American *Apollo* spacecraft docked with the Soviet *Soyuz*. The two commanders of the mission, Tom Stafford of the United States and Alexei Leonov of the Soviet Union, even exchanged a handshake. The greeting was a symbolic end to the race for space and a beginning of international scientific cooperation in space, including the joint Soviet-American *Shuttle-Mir* program.

The United States and the Soviet Union used the competition as an opportunity to develop new scientific technologies. Space science has since expanded in the United States, Russia, and Europe to include multibillion-dollar exploratory missions to all parts of the solar system, as well as the development of the Hubble Space Telescope. The Mars rover *Curiosity* and the *Cassini-Huygens* mission to explore Saturn and its moons have both produced great amounts of important scientific information.

The International Space Station

The collaboration continued at the turn of the millennium. In 1998, the International Space Station (ISS) was launched. The ISS is a scientific laboratory that orbits Earth. It has hosted more than 250 people from more than twenty countries. The station is not the property of a single nation, but rather is jointly owned and managed by Europe, the United States, Russia, Canada, and Japan.

The ISS is located roughly 250 miles (402 kilometers) above the surface of Earth. It moves so quickly that it takes just ninety-two minutes for the laboratory to go all around Earth. Astronauts aboard the ISS see sixteen sunrises and sunsets every single day. Altogether, they typically spend about six months aboard the station, performing a variety of experiments, from biological experiments on rodents and plants to tests of the effects of zero gravity on humans. Researchers on the ISS have conducted more than three thousand experiments to date.

The future of the ISS is uncertain. While NASA in the United States approved financial support through at least 2030, Russia said that it plans to leave the International Space Station after 2024. The remaining countries have not yet determined if or how they might manage the ISS without Russia's support.

The Modern Space Race

Modern space exploration has come a long way since the Cold War between the United States and the Soviet Union. Other countries have joined the quest to reach beyond Earth's atmosphere, including China, India, and Japan. The European Union has also flown joint missions to space.

Today, advances in space exploration are less about political prestige and more about economic opportunity. Instead of international superpowers racing against each other, private companies are raising capital and wooing customers. Companies such as SpaceX even have contracts with countries that were once channeling so much of their money into space exploration of their own. In March 2023, SpaceX sent its sixth operational human spaceflight mission to the International Space Station.

SpaceX and other private companies, such as Blue Origin and Virgin Galactic, are also sending private individuals into space. Commercial space activity has more than tripled in the last fifteen years, as the costs of outer space tourism have decreased and the number of available flights has increased. Private companies are also leading the charge to send a human to Mars. The Starship system from SpaceX may someday be capable of carrying up to one hundred people to Mars. This would be a major shift in the exploration of outer space.

About The Digital Age

Alexander Graham Bell

Alexander Graham Bell was born in 1847 in Edinburgh, Scotland. His mother was nearly deaf, and his father was a teacher to the deaf. At age eleven, Bell entered the Royal High School in Edinburgh, but he left four years later before completing his degree. His family relocated three years later to London, where he eventually entered University College in 1868. In 1870, Bell and his family moved yet again, this time to Canada, after the death of two of his brothers from tuberculosis. Bell, independent of his family, moved to Boston the following year. Once there, he began working at the Boston School for Deaf Mutes as a teacher, and he later taught at the Clarke School for the Deaf and the American School for the Deaf. Bell came from a family that researched hearing and speech; his own research in these areas further led him to experiment with hearing devices.

Concurrent with his teaching, Bell began to design new ways of transmitting telegraph messages. At the time, two messages could be transmitted successfully on a single telegraph line. Thomas Alva Edison, backed by Western Union, later expanded this to four messages per line. Alexander Graham Bell helped develop the harmonic telegraph, which could transmit as many as ten messages per line; however, the technology proved less functional in practice than in a lab.

Bell's work with telegraphy attracted investors, though Bell's interest in transmitting signals began to take a back seat to his desire to transmit voices. He submitted his patent for the telephone on February 14, 1876. That same day, Elisha Gray, a competitor of Bell's, notified the patent office of his intention to seek his own patent for the telephone. Bell's and Gray's claims to have invented the device were tested in court. Bell was granted the patent over Gray, and on March 10, 1876, he successfully made the first telephone call. He called his assistant, who was in another room, and said, "Mr. Watson—come here—I want to see you." By August, Bell's telephone was able to successfully transmit its first long-distance call.

The Bell Telephone Company was established in July 1877, and Alexander Graham Bell served as a technology adviser. Bell's interest in telephones, much like his earlier interest in telegraphs, began to wane, and the inventor sold the majority of his shares in the company by the late 1880s. Bell dedicated his remaining years to perfecting the phonograph, investigating ways to use light to transmit sounds, inventing new medical and surgical technologies, and studying aircraft design. He was also a founding member of the National Geographic Society.

Radio

Italy's Guglielmo Marconi is credited with the invention of the radio. As with many other technological innovations, Marconi built on the work of others. Many scientists had experimented with electromagnetic currents and radio waves. James Clerk Maxwell, for example, performed experiments on electromagnetic currents at Cambridge University in 1864. He theorized that these currents, which include radio waves, could travel great distances at the speed of light. German physicist Heinrich Hertz proved this theory in the late 1880s.

While we may expect that radio waves would travel at the speed of sound, music and voices heard on a radio do not travel via sound waves. Rather, they are carried via electromagnetic waves that move at the speed of light, or roughly 186,000 miles (300,000 kilometers) per second. This is much faster than the 1,125 feet (340 meters) per second at which sound travels.

Marconi brought all this research out of the lab and literally into people's living rooms. In September 1899, he telegraphed the results of the America's Cup yacht races from a great distance away. Marconi broadcast the first transatlantic signal and founded his own wireless company by the end of 1901.

The use of radio grew gradually during the First World War, but it became nearly essential in the years afterward. During the Great Depression and the Second World War, radio took off worldwide as a means of communication and entertainment. It helped transform how political leaders addressed the public. In the United States, President Franklin Delano Roosevelt understood the impact of radio communication and developed his "fireside chats." These radio broadcasts were presented more as friendly conversations than as presidential addresses. The intimate medium of radio helped the president communicate on a more personal level with a significant number of Americans. This period was known as the golden age of radio, in part because of Roosevelt's chats, but also because of entertainment such as variety shows, game shows, and popular music that filled the radio waves.

Television

The golden age of radio ended in the 1950s with the advent of the television. American inventor Philo Farnsworth is credited with the invention of the medium, but, like Marconi, Farnsworth built on the work of other inventors. Russian-born inventor Vladimir Zworykin applied for the first television patent in 1923. His "iconoscope" transmitted images over cathode ray tubes. Four years later in Scotland, John Baird demonstrated television technology. He did so again in 1929 and caught the attention of an executive at the Radio Corporation of America (RCA).

The same year that Baird demonstrated his new technology, twenty-one-year-old Farnsworth completed a prototype for the first electronic television system and filed for a patent. RCA pushed back, but Farnsworth was successful in securing the patent for television technology, in part because of an old drawing that Farnsworth's teacher had saved for years, which proved the timeline of his invention.

The ascendance of television across America happened over the course of a decade. In the early 1950s, most top entertainers were still performing live on Broadway stages and in vaudeville houses. In 1950, only 9 percent of American households had a TV. TVs were expensive, and only those close to big northeastern cities lived in range of the broadcast towers. But over the next decade, hundreds of stations opened across the country, and Americans bought up TVs to access the new programming. In 1959, nearly 86 percent of houses had a television. Within the next decade, television would experience its own golden age.

Microwaves

Radio and television brought new forms of entertainment to Americans, but the microwave oven helped transform how food was prepared. Food that once required hours to cook in an oven could be heated in minutes in a microwave.

When Percy Spencer applied for his patent for the microwave in 1945, he called it a "method of treating foodstuffs." The company Spencer worked for, Raytheon, marketed the first microwave oven for home use in 1947. They cost as much as $3,000 at the time, the equivalent of roughly $40,000 in modern purchasing power. Over time, as wartime technologies were adopted for residential use and the price of parts decreased, microwaves became much more affordable. By 1985, the mean price of a microwave was $280, or roughly $790 in modern purchasing power.

While the very first microwave ovens were used in commercial spaces, they quickly became staples in residential kitchens. By the year 2000, 90 percent of U.S. households had a microwave. The technology significantly impacted American life. Companies began to introduce lines of cookware specifically for the microwave. Cookbook writers published cookbooks to teach home cooks how to cook gourmet meals using only the microwave. Quick meals that could be heated in a microwave and enjoyed anywhere—often in front of the television—became popular. Swanson, one of the leaders in TV dinners, sold ten million of its trays of dinner in 1954 alone.

Heating in a microwave is quick and efficient because of absorption. The waves move through the food from the outside toward the middle. This often results in inconsistent cooking and is why foods are often hot on the outside and still cold or frozen in the middle. But it is also why the food can heat so quickly. And while the notion of heating food by sending electromagnetic waves through it may sound dangerous, microwave ovens undergo extensive safety tests.

Computers

As with many other technologies, the modern personal computer was born out of necessity during a major world conflict. But the origin of the technology goes back much further in history. Charles Babbage first conceived of the idea of mathematical tables that could calculate themselves as early as 1812. By 1823, he had created the Difference Engine, one of the earliest calculating machines. Ada Lovelace, who worked closely with Babbage and continued his work with computing machines, is widely considered the first computer programmer.

It was not until the Second World War that the scientific foundations were laid for the modern computer. The first true computers had one purpose: to decipher encrypted messages between the leaders and officers of the Axis powers in World War II. German forces sent regular radio transmissions, protected by sophisticated codes. These codes could be broken by the British and their allies, but the content of the messages took a long time to understand if worked out by hand. The first computers were designed by the British to speed up the process of decrypting messages. This first true electronic computer, called Colossus, helped decrypt a total of sixty-three million characters. Colossus and the computers that followed in the 1950s were physically immense, taking up entire rooms.

By 1975, twenty years after Colossus helped the Allied forces defeat Germany, computers had become much smaller and were able to be used in homes. The technology was mostly popular among hobbyists until three personal computers were introduced in 1977: the Apple Computer, the Tandy TRS-80, and the Commodore Business Machines Personal Electronic Transactor (PET).

Smartphones and Social Media

The first handheld cell phones, weighing more than two pounds (0.9 kg), were developed by Motorola in the early 1970s. Smartphones—mobile phones with advanced computing capabilities—came onto the market in the late 1990s. Apple's introduction of the sleek, lightweight iPhone in 2007, followed in 2008 by phones using the Android operating system, revolutionized the industry. Clunky physical keyboards were replaced by touchscreen interfaces that facilitate wider software, Internet, and multimedia functionality. As demand skyrocketed, prices fell sharply. By the end of 2020, nearly half the world's population owned a smartphone, changing the way people communicate, transact business, relax, learn, and socially interact with one another.

The growth of social media—websites that allow users to create and share content and information—coincided with the growth of smartphone usage. The world's largest social media platform, Facebook, has more than two billion users worldwide. Other popular social media sites include WhatsApp, Instagram, Reddit, and TikTok.