

A Story of Innovation



America *The Story of Us*, airing on HISTORY™ this April, tells the extraordinary story of how America was invented. In each episode we revisit moments where ingenious Americans used new ideas and new innovations to overcome challenges and forge ahead – from the communications mediums that united us as a people, to the technology that made our lives easier and our nation more prosperous, to the ways in which we interacted with our environment.

From the earliest days when Europeans settled the new world, to the events that led to rebellion and American independence, to the westward expansion, to the great internal conflict that was the Civil War, to the rise of our great cities, to the defining moments of our post-World War II nation, *America The Story of Us* shows us where we started, how we evolved, what has endured, and what has changed during the past 400 years.

How much do you know about the people whose new ideas helped our country grow and change into the vibrant and diverse nation that exists today? Write the letter of each innovation in the space in front of the person who was responsible for it. (*Note: While some matches may seem easy, a little research may be needed to match some of the others!*)

Innovator	Innovation
1. ___ Robert Oppenheimer	A. Flash photography
2. ___ Thomas Edison	B. Bessemer steel converter
3. ___ Eli Whitney	C. Steamboat
4. ___ Mary Dixon Kies	D. Manhattan Project
5. ___ Paul Revere	E. Noise reduction system for elevated railroads
6. ___ Andrew Carnegie	F. Electric light bulb
7. ___ Robert Fulton	G. Cotton gin
8. ___ DeWitt Clinton	H. Copperplate engraving
9. ___ Mary Walton	I. Patented process to improve hat making
10. ___ Jacob Riis	J. Erie Canal

★ **As you watch *America The Story of Us* with your family, look for the stories of some of these people and others whose ideas and innovations helped our country to grow and change and consider how they have helped to shape the lives we live today.**

The Primary Source...

Benjamin Franklin was a man of many talents. He was, among other things, a politician, a philosopher, a printer and publisher, a scientist, and an inventor. You have probably read about how he experimented with the electrical nature of lightning by flying a kite with a metal key attached during a thunderstorm. You can read some of the notes that Franklin made as he thought about this phenomenon – *Observations and Suppositions Towards Forming a New Hypothesis for Explaining the Several Phenomena of Thunder Gusts* (1749) – at www.constitution.org/primarysources/electric.html. (Be sure to read what he said in Notes 43 and 44!)



National Portrait Gallery, London

What comes next? Which innovators and innovations of today do you think will have the greatest influence on the American story in the years to come?



Communications Innovations

Throughout the history of our country, innovations in the way people communicated and shared the news of the day played a significant role in shaping popular opinion – and in changing the course of our history.

In Episode 1 of *America The Story of Us*, we watch as 4,000 British troops move into Boston – a daunting presence in a city with a total population of only 16,000. We hear the shot ring out that will move America one step closer to war with England. We see the panic – and the violence – that ensues. We see the body of Crispus Attucks – a runaway slave and the first casualty of the American Revolution who was immortalized as “the first to defy, the first to die” – lying lifeless in the street.



Deemed the Boston Massacre by a local printer, political radical, and skilled practitioner of the new technology of engraving by the name of Paul Revere, this terrible event may never have risen to the level of importance it did except for one thing: Revere’s engraving of the event, titled “The Bloody Massacre perpetrated

in King-Street, Boston, on March 5th, 1770, by a party of the 29th Regt.,” which was published in the *Boston Gazette*. Within days it was spread by the news media, and it became the topic of conversation throughout most of America.

Take a look at that famous engraving. You can find it at www.masshist.org/online/query3.cfm?queryID=2.

What do you see in the image, and how would you describe the event that it depicts?

The Primary Source...

The trials of the British captain and the eight enlisted men who were involved in this episode proved to be two of the longest in Colonial history, and they became landmarks in American legal history. To learn more about the Boston Massacre Trial and to read copies of the depositions of the witnesses to the event, go to www.law.umkc.edu/faculty/projects/ftrials/bostonmassacre/bostonmassacre.html.

How does Paul Revere’s image compare with the testimony of the witnesses? Having viewed the engraving and read the depositions, how would you describe what happened that day in Boston? Use the back of this paper to organize your thoughts in preparation for a class discussion.

★ As you view the episodes of *America The Story of Us* with your family, look for other examples of innovations in communications. Keep a list of them and, when you have seen all 12 episodes, choose one innovation that you would like to learn more about. We’ve listed a few below to help you get started.

Innovations in Communications

- **Episode 5:** The *telegraph* is used to spread the news of Lincoln’s Emancipation Proclamation.
- **Episode 7:** Jacob Riis uses *flash photography* to take the first photos of a New York tenement.
- **Episode 9:** *Radio* broadcasts accounts of the Louis-Schmeling boxing matches.

Of all the communications innovations that exist today – text messaging and Twitter, for example – which do you think is the most effective? Why?

What do you think will be the next great innovation in communications, and what effect do you think it will have on this country?

Technological Innovations

As Episode 6 of *America The Story of Us* opens, we see the faces of Chinese laborers, fugitives from poverty and hunger at home, lured to our shores by news of the California gold rush, but driven by prejudice and discrimination out of the mines and into the brutal and backbreaking work of building a railroad through the Sierra Nevada mountains.



We meet Theodore Judah, a railroad engineer from Connecticut who has come to California to build the Sacramento Valley Railroad, the first railroad line west of the Missouri River. We watch as Scottish chemist James Howden develops the formula for nitroglycerin, the powerful explosive that will allow workers to blast through the hard rock of the mountains and complete the Transcontinental Railroad, making it possible to travel from New York to San Francisco in the unprecedented time of just seven days.

What do you think were the most important impacts of the railroad on our developing country? Why? Do you, like Thoreau, think there were drawbacks as well? If so, what were they? Use the back of this paper to make notes in preparation for a class discussion.

★ As you view the episodes of *America The Story of Us*, with your family, look for other examples of technological innovations and the people who made them possible. Keep a list of them and, when you have seen all 12 episodes, choose one innovation that you would like to learn more about. We've listed a few below to help you get started.



The Primary Source...

While most people praised the coming of the railroad as an incredible advancement in transportation technology, American philosopher Henry David Thoreau expressed mixed feelings about the consequences of railroad transportation. He wrote at length about the railroad in Chapter 4 of his book, *Walden*. (You can read the text of that chapter at <http://thoreau.eserver.org/walden04.html>.) Despite his hesitations, Thoreau did acknowledge that railroads had some remarkable benefits.

In that chapter, Thoreau wrote: "Have not men improved somewhat in punctuality since the railroad was invented? Do they not talk and think faster in the depot than they did in the stage-office?"

What do you think Thoreau meant when he linked punctuality and speed to the railroad?

Innovations in Technology

- **Episode 8:** The Hamill Brothers' *rotary drill* transforms the Texas oil fields.
- **Episode 9:** Civil engineer Frank Crowe builds the Hoover Dam, bringing *hydroelectric power* to the West.
- **Episode 10:** The versatile workhorse known as the *jeep* helps make the U.S. infantry more mobile.

What do you think will be the next great innovation in technology, and what effect do you think it will have on this country?

Environmental Transformations

Throughout our history, the interactions between Americans and the environment have had a significant impact on our country. As *America The Story of Us* begins, we see the starving colonists and broken-down huts of the failed Jamestown settlement. The colonists, who were unprepared for the challenges they would face and who failed to grow food or trade with their Native American neighbors, suffered terrible hardships in Jamestown's early years. As the series unfolds, we see the young nation expand when brave individuals such as Meriwether Lewis and William Clark explore and chart the wilderness to the west. We see steamboats transform the Mississippi River into a major artery for trade throughout the Midwest. We watch as Americans endure the Great Depression and nature once again gains the upper hand as the rains dry up and the once-fertile plains turn into a giant Dust Bowl.



The hardships endured by Americans who experienced life in the Dust Bowl were immortalized by an Oklahoma-born folk singer by the name of Woodrow Wilson (Woodie) Guthrie. His songs – which reflected his desire to give voice to those who had suffered so much – attracted widespread public attention. Take a look at the lyrics of one of Woody Guthrie's songs – “Dust Storm Disaster,” also known as “The Great Dust Storm.” You will find them at www.woodyguthrie.org/Lyrics/Dust_Storm_Disaster.htm.

In your own words, describe the picture that Woody Guthrie paints with the lyrics to that song.

The Primary Source...

Dorothea Lange was a photographer who is best known for her chronicles of the Great Depression and for her photographs of migratory farm workers. Her most famous photograph is known as “Migrant Mother.” You can view some of her photographs at www.historyplace.com/unitedstates/lange/index.html. Which of Lange's images do you find to be the most moving? What story does it tell? Can you relate the images in Lange's photographs to the images Woody Guthrie invoked in his songs? You can use the back of this paper to make some notes.



★ As you view the episodes of *America The Story of Us* with your family, look for other examples of ways in which Americans' transformations of the environment helped to shape our history. Keep a list of them and, when you have seen all 12 episodes, choose one example that you would like to learn more about. We've listed a few below to help you get started.

Transforming the Environment

- Episode 3: Pioneers build cabins and *stake claims* on land in Indiana.
- Episode 4: Workers dig out more than 11 million cubic yards of earth and rock to construct the *Erie Canal*.
- Episode 6: *Barbed wire fences* parcel up homesteads in Kansas and Nebraska, breaking up the open range.

Throughout U.S. history, many notable innovations have had the goal of controlling or conquering nature. Today, Americans have become more focused on finding ways to live harmoniously with the natural world. What do you think the future holds for our environment? Can you think of examples of environmental innovations or “green” technology?
