

Benjamin Franklin: Inventor, Printer, Writer

Adapted from America's Story by the Library of Congress

By Kira Freed

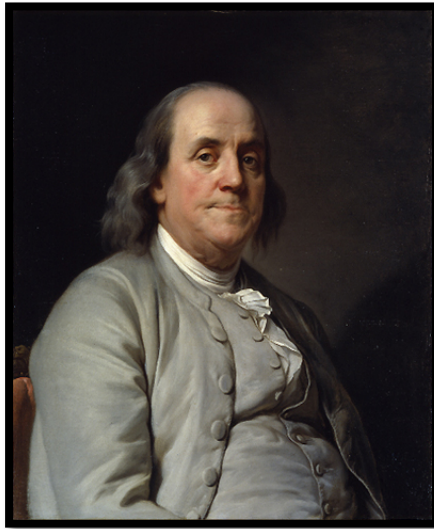
When you hear the name “Ben Franklin”, you might think about the smiling face that appears on a hundred dollar bill. You might already know about the role Ben Franklin played in the America Revolution. But did you know that Ben Franklin was also a scientist, writer, and inventor? As a scientist, he is best known for his experiments with electricity. As a writer, he is known for *Poor Richard's Almanac* and letters about his life. He is also known as the only person to sign all three documents that established the United States: the Declaration of Independence, the Constitution, and the peace treaty with Britain that ended the Revolutionary War.

Ben Franklin and Electricity

In the 1740s, people used electricity for magic tricks by creating sparks and shocks. Scientists did experiments with electricity, but scientific thinking about electricity had not changed much in hundreds of years. Electricity wasn't “useful” yet.

Yet electricity fascinated Ben Franklin. He wanted to know more than just the popular tricks. He had an idea about electricity and the lightning that he saw during thunderstorms. Franklin noticed that both phenomena created light, made loud crashes when they exploded, were attracted to metal, and had the same smell. Based on these similarities, Franklin thought electricity and lightning were one and the same. A few people shared his belief, but no one had ever proven it.

Franklin knew that to evaluate his theory, he would need to do an experiment. He needed to get something close enough to the clouds to attract lightning, and so, he flew a kite high into the sky with an iron key attached to the top of it. The key was attached to a metal wire. He put the other end of the wire into a container that could store an electrical charge. His experiment worked! Electricity from lightning in the clouds traveled from the kite to the key and then down the wire into the container. Franklin and a few other scientists in Europe (who did their own experiments) proved that lightning and electricity were the same thing.



This portrait of Benjamin Franklin as an older man now hangs in the National Portrait Gallery in Washington, DC. It was painted by Joseph Duplessis in 1778. This portrait is the same as the one used on the \$100 bill, which is often called a “Benjamin” as a tribute to the man featured on it.

Franklin wanted to harness this novel understanding to help solve a problem. At the time, many people's houses burned down after being struck by lightning. Franklin knew that lightning usually hit the highest part of a building. He also knew that the electrical current in lightning could start a fire – so he invented the lightning rod. Made of metal, a lightning rod is attached to the highest point of a house. The lightning hits the rod instead of the house. The electrical current from the lightning travels into the ground and leaves the house unharmed. Today, lightning rods are still used to conduct electricity safely to the ground.

Ben Franklin, the Printer

In the 18th century, children didn't have much choice about what they wanted to do when they grew up. In most families, the father would decide what job his son would take when he matured. For this reason, Ben's father sent him to school to become a preacher. But school was expensive and would have taken many years, so his father took him out of school after only two years. He put 10-year-old Ben to work at the family business, making soap and candles.

But Ben wasn't any more interested in soaps and candles than he was in preaching. What Ben really wanted to do was to go to sea. A great swimmer and lover of the ocean, he dreamed of working on a ship. However, one of Ben's older brothers had perished at sea, so Ben's father forbid him from pursuing his dream. When another brother, James, returned from England to establish his own printing business, Ben became his brother's apprentice.

Ben Franklin, the Inventor

In addition to the lightning rod, Ben Franklin invented many other things. Here are a few:

- **Bifocals:** glasses with lenses that have two parts, one for near vision and the other for distant vision
- **The Franklin stove:** a fireplace lined with metal that was safer for burning wood than an open fireplace
- **Long arm:** a grasping device for getting books off high shelves

In Ben's time, apprentices had to sign papers agreeing to obey and work for their "master" for a certain amount of time. Although Ben wasn't happy about it, he signed up to be his brother's apprentice for nine long years, until he was 21. Ben worked hard and learned rapidly, but he ran away at the age of 17 to try to make it on his own.

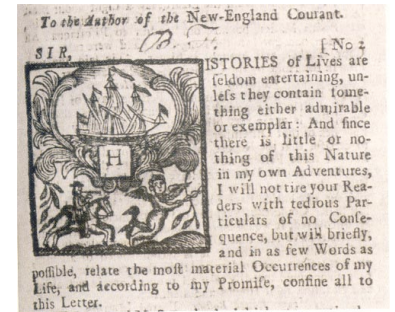
Ben opened a successful printing shop in Philadelphia. His shop printed all kinds of materials, including money for the state of Pennsylvania as well as his own newspaper and books. Despite all of the other achievements that would come later in his life, Ben thought of himself as a printer for the rest of his life.

Ben Franklin, the Writer

Ben Franklin loved to read. When he was young, he was a voracious reader, borrowing books from anyone who would lend them. He read about all kinds of subjects. Franklin also wanted to write, but he didn't know how, so he taught himself.

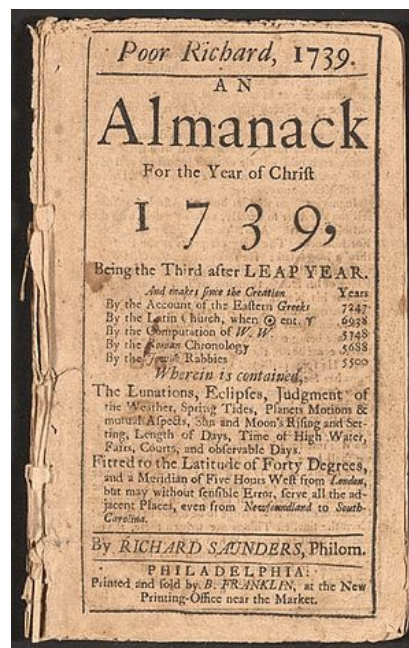
When Ben was 16, his brother's newspaper *The New England Courant* published 14 of his letters. In the 18th century, many people wrote for publications using pseudonyms, or fake

names. Franklin made up a character by the name of Mrs. Silence Dogood. As Mrs. Dogood, Franklin claimed to be a middle-aged widow and wrote humorous letters that were designed to amuse readers. People suspected that Mrs. Dogood was not who she said she was, but many were surprised to find out that a lad as young as Franklin had written the letters.



This picture shows part of a letter from "Mrs. Silence Dogood" as it originally appeared in the newspaper.

Franklin's most famous pseudonym, however, was Richard Saunders, also known as Poor Richard of *Poor Richard's Almanac*. An almanac is a reference book for everyday life that contains valuable information like calendars and weather forecasts. One edition is published annually, containing information for that year. As Poor Richard, Ben Franklin presented himself as a slightly dull, but often funny, country bumpkin who believed in hard work and simple living. Many of Franklin's most famous quotes are from *Poor Richard's*. These include "haste makes waste" and "early to bed and early to rise makes a man healthy, wealthy, and wise."



A 1739 edition of *Poor Richard's Almanac*

was an immediate success. Franklin published one each year for the next 26 years and sold almost 10,000 copies annually. During his lifetime, he also wrote newspaper articles, letters about his life, and letters on a wide range of subjects. These included politics, science, libraries, and even fire stations. More than two centuries after his death, Ben Franklin's contributions are still remembered by the many towns, counties, schools, and companies named after him.