

***How Ben Franklin Stole the Lightning*** by Rosalyn Schanze China: Harper Collins Publishers, 2003 ISBN: 0-688-16993-7

**Annotation:** This book focuses on Benjamin Franklin's role as an inventor of whimsical gadgets and practical contraptions with an emphasis on his famous electrical experiment of flying a kite during a rainstorm. In an inventive way, Rosalyn Schanze has crafted a brilliant American original.

**Grade:** 5

**Duration:** 2 Class Periods

### **Maryland State Curriculum**

**Economics Standard:** Students will develop economic reasoning to understand the historical development and current status of economic principles, institutions, and processes needed to be effective citizens, consumers, and workers participating in local communities, the nation, and the world.

4.A.3.a Explain how the development of new products and new technologies affected the way people lived

### **History Standard:**

5.B.2.c Analyze the different roles and viewpoints of individuals and groups, such as women, men, free and enslaved Africans, and Native Americans during the Revolutionary period

### **Reading Standard:**

1.D.1 Develop and apply vocabulary through exposure to a variety of texts  
1.E.3 Use strategies to make meaning from text (during reading)

**Objectives:** Students will...

- describe the impact of Benjamin Franklin's ideas on the goods and services available in Colonial America.
- analyze the importance of Benjamin Franklin to modern society.

### **Vocabulary**

**goods:** physically tangible objects that can be used to satisfy economic wants, including but not limited to food, shoes, cars, houses, books and furniture.

**services:** physically intangible actions that can be performed to satisfy economic wants, including but not limited to medical care, dental care, haircuts, education, police protection, fire protection and national defense

**technology:** skills, methods, tools, machines and other things used to perform activities. Technology changes over time and affects the way we live, work, and play.

### **Teacher Materials**

- A copy of *How Ben Franklin Stole the Lightning*
- Teacher Resource Sheet 1: *Character Quotes*
- Teacher Resource Sheet 2: *Benjamin Franklin: Goods and Services* (Answer Key)
- Transparency of Student Resource Sheet 2: *Museum Exhibit Information*

**Note to Teacher:** Prior to the lesson, cut out the character quotes from Teacher Resource Sheet #1 and paste onto individual index cards.

### Student Materials

- Student Resource Sheet 1: *Benjamin Franklin: Goods and Services*
- Student Resource Sheet #2: *Museum Exhibit Information*
- Student Resource Sheet #3: *The Union Fire Company*
- Student Resource Sheet #4: *Fire Insurance Company*
- Student Resource Sheet #5: *The Library Company*
- Student Resource Sheet #6: *Postal Service*
- Student Resource Sheet #7: *The Philadelphia Academy*
- Student Resource Sheet #8: *Pennsylvania Hospital*
- Student Resource Sheet #9: *Bifocals*
- Student Resource Sheet #10: *Franklin Stove*

### Additional Resources

Barretta, Gene. *Now & Ben: The Modern Inventions of Benjamin Franklin*. New York: Henry Holt and Company, 2006.

“Benjamin Franklin,” *Cobblestone*, September 1992.

Dash, Joan. *A Dangerous Engine: Benjamin Franklin, from Scientist to Diplomat*. New York: Francis Foster Books, 2006.

Fritz, Jean. *What’s the Big Idea, Ben Franklin?* New York: Coward, McCann & Geoghegan, Inc. 1976.

Giblin, James. *The Amazing Life of Benjamin Franklin*. New York: Scholastic, 2000.

Harness, Cheryl. *The Remarkable Benjamin Franklin*. Washington, D.C.: National Geographic, 2005.

“Life and Liberty in Colonial Philadelphia,” *Cobblestone*, October 2004.

[http://www.pbs.org/benfranklin/exp\\_town.html](http://www.pbs.org/benfranklin/exp_town.html)

*Ben’s Town*: Walk down the street and learn how Franklin improved your town.

### Motivation

1. Divide the class into eight groups of three or four. Distribute one *Character Quotes* index card to each group. Have the groups read their quote and generate as many words as possible that might describe the author of the quote.
2. After each group has completed this task, have one member from each group read their quote to the class and share the list of qualities and traits that they associate with the author of the quote. Keep a master list of qualities and traits on the overhead or chalkboard as each group presents.
3. After each group has presented, explain to the class that each of these quotes is from the same person. Have them guess the person. After several guesses, tell them that the person is Benjamin Franklin.

4. Ask each group to work together to use the master list of character traits to create a preliminary personality profile of Franklin. Have them use the following sentence starter.

Benjamin Franklin was the type of person who \_\_\_\_\_. He also seemed to be \_\_\_\_\_. Other traits of his personality included \_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_.

### Development

1. Distribute Student Resource Sheet #1: *Benjamin Franklin: Goods and Services*. Remind students that **goods** are tangible objects that satisfy economic wants and **services** are activities performed by people, firms, or government agencies that satisfy economic wants. Tell students to listen for and record examples of goods and services as you read *How Ben Franklin Stole the Lightning* by Rosalyn Schanzer. After reading, review their answers. (See Teacher Resource Sheet #2.)
2. Revisit *How Ben Franklin Stole the Lightning*. Tell students that they are going to create a museum exhibit highlighting Benjamin Franklin's contributions to modern day goods and services. Using a transparency of Student Resource Sheet # 2: *Museum Exhibit Information*, devise an idea for an exhibit about the lightning rod. Complete the information section as a class. Have student volunteers draw the exhibit idea on poster paper. Post the exhibit.
3. Have students return to their original groups. Assign each group one of the following:
  - *The Library Company*
  - *The Union Fire Company*
  - *Fire Insurance Company*
  - *Postal Service*
  - *The Philadelphia Academy*
  - *The Pennsylvania Hospital*
  - *Bifocals*
  - *Franklin Stove*

Distribute Student Resource Sheet #2, "Museum Exhibit Information" and the appropriate resource sheet to each group. Groups should read their resource sheet and complete their graphic organizer. After they have completed their graphic organizer, give groups a piece of poster paper and coloring pencils and markers. Have them create their exhibit on the poster paper. After they have completed their poster, display it in the classroom.

4. After all groups have finished their posters, conduct a gallery walk. (Have groups move from poster to poster in an organized manner until they have seen every exhibit.) Once all of the exhibits have been viewed, hold a class discussion of the various goods and services to which Benjamin Franklin contributed.

NOTE: This is a good time to bring in the aspect of “how new technology affected the way people lived.”

5. **Assessment:** Have students write a response to the following prompt.

“If you would not be forgotten,  
As soon as you are dead and rotten,  
Either write things worthy reading,  
or do things worth the writing.”

- Benjamin Franklin

Did Benjamin Franklin “do things worth the writing”? Write an essay describing one of the goods and one of the services for which Franklin is responsible, using information from today’s lesson. Explain why those things are still important to society today.

6. **Closure:** Re-visit Franklin’s quote from the Assessment. Have students discuss their future goals and how they might “do things worth the writing.”

## **Character Quotes**

“A penny saved is a penny earned.”

“Early to bed and early to rise, makes a man healthy,  
wealthy, and wise.”

“He that lieth down with Dogs, shall rise up with Fleas.”

“The good men may do separately...is small compared with  
what they may do collectively.”

“Well done is better than well said.”

“Be slow in choosing a friend, slower in changing.”

“There was never a good war or a bad peace.”

“In the world nothing can be said to be certain except death  
and taxes.”

**Answer Key: Benjamin Franklin Goods and Services**

<b>Goods</b>	<b>Services</b>
Almanacs Library Chair Book grabber Odometer Bifocals Franklin Stove Armonica Lightning Rod Newspaper Clock with second hand Electric motor Battery that stored electricity Electric bells	Soldier Politician Lending Library Post Office Hospital Free Academy Fire Department Musician Scientist

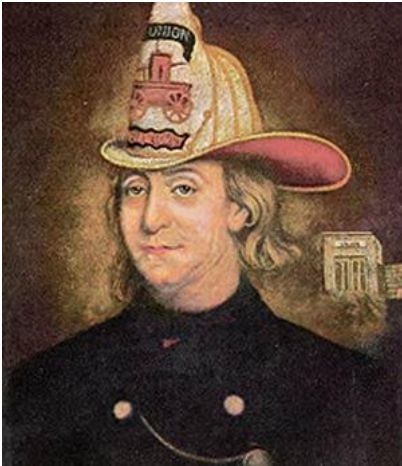
**Benjamin Franklin: Goods and Services**

<b>Goods</b>	<b>Services</b>

**Museum Exhibit Information**

<b>Topic:</b>
<b>Good or Service?</b>
<b>Description:</b>
<b>Importance to Colonial Society:</b>
<b>Importance to Modern Day:</b>
<b>Mock-up of Exhibit:</b> You must include the following: Date, Visual of Good or Service, Importance to Colonial Society, Importance to Modern Day

## The Union Fire Company



Living conditions in Colonial America were very hazardous. The strict fire and building codes we have today did not exist. Buildings were very close together and most of them were built of wood and heated by fireplaces. Because of this, the danger of fire raging throughout a town or city was always a possibility.

On a visit to Boston, Benjamin Franklin noted that the inhabitants of his native city were far better prepared to fight fires than those in Philadelphia.

Saying “an ounce of prevention is worth a pound of cure,” Franklin argued that goodwill and amateur firefighters were not enough. He suggested a “Club or Society of active Men belonging to each Fire Engine; whose Business is to attend all Fires with it whenever they happen.”

The Union Fire Company was incorporated in 1736. Members of the fire company pledged to help one another should fire break out or threaten one of their homes or businesses. Not only would they attempt to put out the flames, members would also help save goods within the building and protect the building from looters.

Members had to provide at least two buckets for carrying water and several cloth bags for carrying items rescued from the fire. The original twenty-five members of the group met once a month to discuss fire-fighting techniques, to establish company policies, and to socialize.

So many men wanted to join Franklin’s Union Company that he suggested it would be more beneficial to the city if they formed their own fire brigades. In the next several years, Philadelphians witnessed the birth of the Heart-in-Hand, the Britannia, the Fellowship, as well as several other fire companies.

## Fire Insurance Company



Benjamin Franklin was one of the early supporters of insurance. In 1751, Franklin and his Union Fire Company met with other Philadelphia fire-fighting companies to discuss the formation of a fire insurance company. Out of those discussions, the Philadelphia Contributionship was formed. About seventy Philadelphians initially

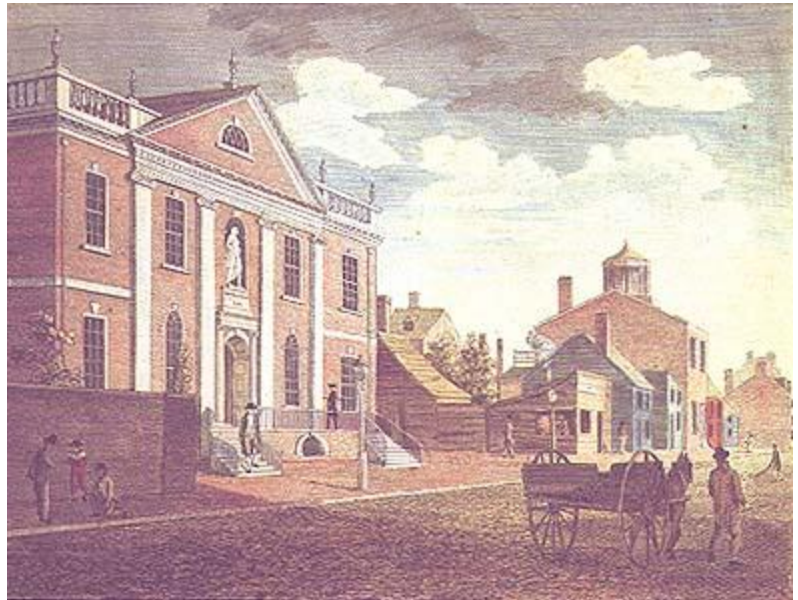
subscribed to the contributionship. In May 1752, the board of directors, of which Franklin was a member, decided to form an insurance company. Members agreed to make equal payments to the contributionship, which would be used to pay for losses any member would sustain through fire to his property.

The first policies had a term of seven years. After the policies expired, the premium money was returned to the policyholders. In the first year of operation, 143 policies were written.

## The Library Company

Books in Colonial America were expensive and difficult to obtain. Franklin and his friends were mostly middle class men of moderate means. None alone could have afforded a comprehensive library. They decided to combine their collections, allowing them access to a greater number of books.

In 1731 Benjamin Franklin proposed the creation of a subscription library. This library, which became known as the Library Company, was open to anyone who was willing (and able) to pay a membership fee and an annual subscription. At the beginning, fifty subscribers invested forty shillings each and promised to pay ten shillings a year thereafter to buy books and maintain a shareholder's library. As the library grew and became



more popular, it moved into a building of its own and began to allow nonmembers the ability to borrow materials for a small fee.

Eventually the idea of local subscription libraries caught on in the Colonies. According to Franklin, they “have improved the general conversation of the Americans” and “made the common tradesman and farmers as intelligent as most gentlemen from other countries.” The Library Company still exists today and is considered the oldest cultural institution in the United States.

## Postal Service

In 1737, Benjamin Franklin was appointed postmaster of Philadelphia. He set aside a corner of his printing shop to receive and distribute mail. For a fee of one penny, he delivered mail directly to the homes of Philadelphia citizens. He decided to better organize the mail route. He invented a simple odometer and attached it to his carriage. With it, he measured the route and calculated a more efficient course by which to deliver the mail. This shortened the time required to get mail by days in some cases.

He was so successful with the Philadelphia postal system that he was selected deputy postmaster general for the northern colonies. In that job, he made the Colonial postal system an efficient and profitable business. When Franklin left office, post roads operated from Maine to Florida and from New York to Canada, and mail between the colonies and the mother country operated on a regular schedule, with posted times.

In 1775 the Continental Congress appointed him postmaster general of North America. Franklin served until November 7, 1776. America's present Postal Service descends in an unbroken line from the system he planned and placed in operation, and history gives him credit for establishing the basis of the postal service that is still in existence today.



## The Philadelphia Academy

Even though he only had two years of formal schooling, Benjamin Franklin believed that education was important for all citizens- rich, poor, black, white, male, or female. In 1749 he published a pamphlet entitled *Proposals Relating to the Education of Youth in Pennsylvania*. As a result of this pamphlet, wealthy citizens founded the Philadelphia Academy in 1751. This institution, unlike Harvard, William & Mary, Princeton or Yale, was free of religious control and instructed students in English, rather than the Latin and Greek that was popular during that time. It focused on practical instruction such as writing, arithmetic, accounting, oratory, history, and business skills with “regard being had to the several professions for which they are attended. Students were expected to be virtuous, living “plainly, temperately and frugally” and “frequently exercise in running, leaping, wrestling and swimming.” In 1755 it became the College, Academy, and Charitable School of Philadelphia and was empowered to grant college degrees. In 1791 it became the University of Pennsylvania.



## Pennsylvania Hospital

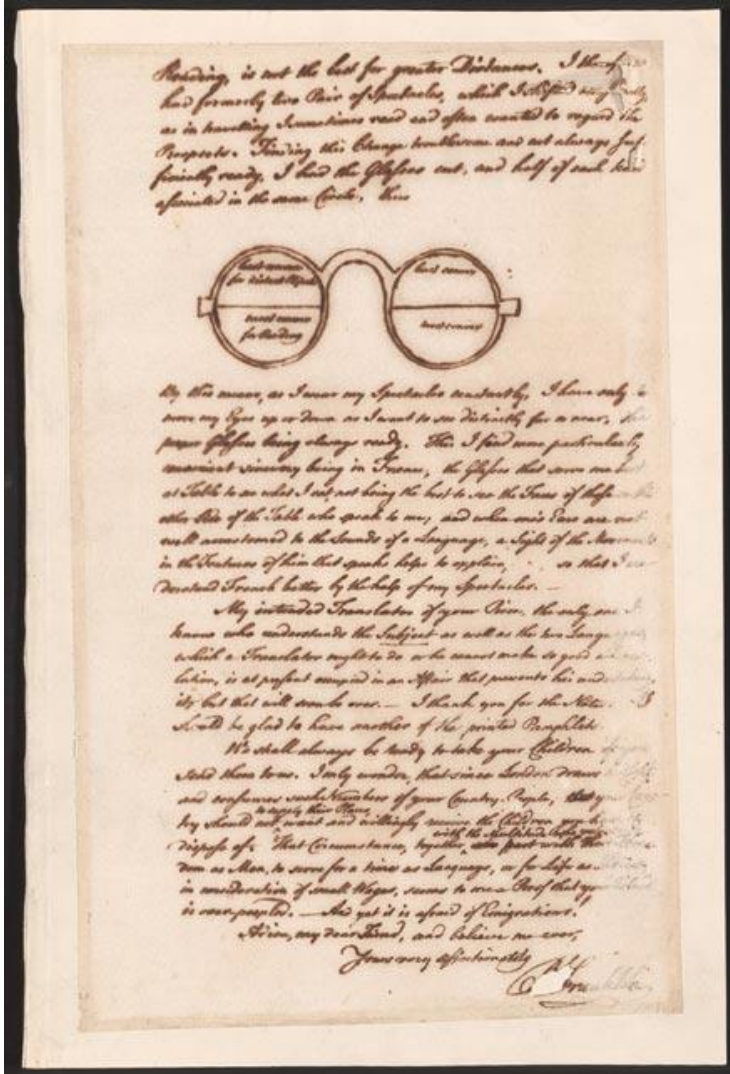
The idea for the hospital originated with Dr. Thomas Bond. Born in Calvert County, Maryland, Bond, a Quaker, moved to Philadelphia as a young man. In 1738, in order to further his medical education, he went abroad to study medicine in London. While in Europe, Bond spent time at the famous French hospital, the Hotel-Dieu in Paris, and became impressed with the continent's new hospital movement. Bond returned to Philadelphia in 1739 and two years later was appointed Port Inspector for Contagious Diseases. Around 1750, Bond "conceived the idea of establishing a hospital in Philadelphia for the reception and cure of poor sick persons."



Bond and Benjamin Franklin were long-standing friends. Bond was a member of Franklin's Library Company and helped establish the American Philosophical Society and the Academy of Philadelphia, which evolved into the University of Pennsylvania. In order to help Bond get the hospital started, Franklin organized a petition stating that although the Pennsylvania Assembly had made many compassionate and charitable provisions for the relief of the poor, a small provincial hospital was necessary. A bill was soon introduced that urged the Assembly to establish a hospital "to care for the sick poor of the Province and for the reception and care of lunatics."

Raising money for this project was difficult. So Franklin devised a clever plan. He got the Assembly to agree to contribute 2000 Pounds if he could match that money with private funds. Franklin's fundraising effort brought in more than the required amount and Pennsylvania Hospital was founded in 1751.

### Bifocals



Benjamin Franklin in the 1780's developed bifocal glasses, or what he called double spectacles. Later he wrote, "I therefore had formerly two pairs of spectacles, which I shifted occasionally, as in traveling I sometimes read, and often wanted to regard the prospects. Finding this change troublesome, and not always sufficiently ready, I had the glasses cut and a half of each kind associated in the same circle. By this means, as I wear my own spectacles constantly, I have only to move my eyes up or down, as I want to see distinctly far or near, the proper glasses being always ready."

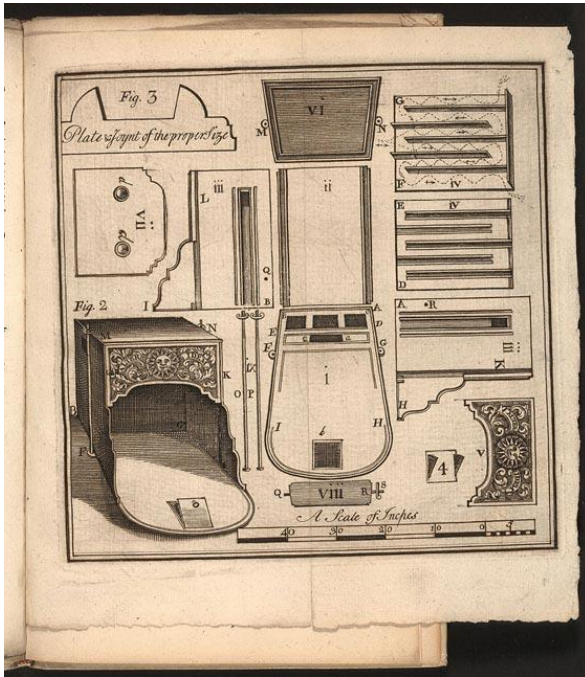
Franklin told George Whately, London Merchant and friend, that he found his double spectacles particularly useful at dinner in France, where he could see the food he was eating and watch the facial expressions of

those seated at the table with him, which helped interpret the words being said. He wrote: "I understand French better by the help of my Spectacles."

## Franklin Stove

In Colonial America, severe winters made it extremely cold in people's houses. This was not only a result of poor insulation, but also due to the fact homes back then were built purely of wood. Many colonists tried to warm their homes by building open fires inside. This was very dangerous and potentially harmful to both families and their homes.

In 1742 Franklin invented a freestanding iron furnace stove to solve this problem.



This appliance allowed people to warm their homes less dangerously and with less wood. It could heat rooms more efficiently than wall-bound fireplaces because the heat it generated spread out in all directions, and was also absorbed by the furnace's iron walls, so that the stove provided warmth even after the fire went out. Unfortunately his invention had a flaw; he had designed it so the smoke would come out from the bottom. Since smoke rises, this made it impossible for his original stove to work properly. But, even with this major flaw it was better and safer than previous methods. To this day, the stove is called the "Franklin Stove."

The governor of Pennsylvania offered to give Franklin a patent for the sole right of producing and selling his stove. However Franklin declined because he believed that people's appreciation of his invention was better than any financial reward. He wrote in his autobiography, "As we enjoy great advantages from the inventions of others, we should be glad of an opportunity to serve others by any invention of ours; and this we should do freely and generously."