

Guided Reading Level: O

Genre: Informational

Text Features: end papers, illustrations, labels, diagrams

Lesson Objective: Social Studies

Students will generate questions about individuals and groups who have shaped historical changes and continuities.

Essential Question

Why have Dr. Franklin's inventions endured for more than two hundred years?

Lesson Objective: ELA

Students will learn about the common Latin prefix *bi-* and how it affects the meanings of root words.

Background Knowledge

Explain to students that Benjamin Franklin is best known as one of the Founding Fathers of the United States because he helped draft the Constitution and the Declaration of Independence. Explain that Founding Fathers were statesmen during the American Revolutionary period. Consider previewing selected vocabulary based upon the needs of your students before they read the text. (Vocabulary is listed below in the order it appears in the text.)

Vocabulary

circa	primitive
originated	ventilation
gadget	suffocating
current	churned
avid	odometer
citrus fruits	postmaster
scurvy	general
interlude	sanitation
	pivotal



Now & Ben

The Modern Inventions of Benjamin Franklin

by: Gene Barretta

Why This Text?

This highly illustrated text uses a “now and Ben” (now and then) text structure to highlight the enduring nature of many of Dr. Benjamin Franklin’s inventions from more than two hundred years ago by featuring Franklin’s original concept and how it is translated today.

Preparing to Read

Explain that this is an informational text written to teach readers about a famous American inventor who lived more than two hundred years ago. Point out that we are still enjoying many of his inventions today. Ask how many students have heard of Benjamin Franklin. Encourage them to share what they know. Do not confirm or deny what they share. Then have students refer to the endpapers of the book. Explain that each diagram represents one of Benjamin Franklin’s inventions. Ask, *How are the diagrams organized?* (chronological order) Read through the inventions together.

Explain that *Now & Ben* is about Benjamin Franklin’s inventions, but that he also helped draft the Constitution and the Declaration of Independence —two important documents in the history of the United States.

Reading Informational Text

Have the students read the text independently. Once all students have finished reading, ask them to refer to the first spread in the book. Read the text on the right-hand page together. Remind students that it is important to use the illustrations or other graphics in informational text as these features explain or extend the information provided in the text. Then encourage students to study the illustrations and share everything they can learn about Benjamin Franklin that isn’t included in the text.

Connect and Respond

1. *What does the disconnected snake represent?* (If the colonies continued acting on their own rather than joining forces, they would be weak and die like a disconnected snake.)
2. *Why do you think Ben Franklin added a stepladder to his library chair?* (Books that are stored on shelves are often too high to reach without a stepladder.)
3. *What prompted Ben Franklin to invent bifocals?* (Ben originally designed bifocals for himself after he grew tired of switching between two pairs of glasses.)

Morphology

Call students' attention to the word *bifocals* in the text. Read the two pages together.

- Write the word *bifocals* where all can see. Underline the prefix *bi-*. Remind students that a prefix is a word part added to the beginning of a word that changes the word's meaning.
- Then explain that the prefix *bi-* comes from Latin and means "two." Establish that the word *bifocals* means "two focals, or focuses."
- Ask, *How does the meaning of this word match Dr. Franklin's invention?* (Dr. Franklin's invention combined two sets of lenses into one pair of glasses. The bottom lens helps to see near, and the top lens helps to see far.)

Language Arts Activity

Have students write a paragraph about which of Benjamin Franklin's inventions they think will help shape the future and how that invention may change over time.

Primary Source Activity

Remind students that Ben Franklin's first invention was a pair of swim fins. He invented the swim fins in 1717 when he was just 11 years old. Explain that he enjoyed swimming from a young age and continued swimming throughout his life.

Share the Primary Source provided. Explain that it is a description in Ben Franklin's words of his swim fins invention. Ask students whether they enjoy swimming and if they have ever used swim fins for their feet.

Discuss that most inventions are created to solve a problem or simplify a job or process. Have students explain how the following Dr. Franklin's inventions solved a problem or made life easier:

- bifocals (*people no longer needed two pairs of glasses to see near and far*)
- lightning rod (*prevented lightning from striking buildings and starting fires*)
- long arm (*helped people get things that were out of reach*)

Encourage students to think of a problem they would like to solve with an invention. You may want to brainstorm a class list of problems. Then challenge students to plan an invention to solve the problem. Ask them to write a description of the invention as well as draw a diagram. You may prefer to have them actually create a model of their invention. Provide time for sharing.

Social Studies Activity

Remind students that Benjamin Franklin also helped draft the Constitution of the United States. This document established laws and rights for the people of the United States. Share background with students on Ben Franklin's role as a Founding Father. If students could meet Ben Franklin, what questions would they ask him. Encourage students to each write at least two questions. Provide time for sharing.

Materials/Resources Needed

paper
pencils
crayons
miscellaneous craft materials

Support English Learning

Offer realia, gestures, or photos to support the introduction of the new vocabulary.

- Provide English learners context for what life was like at the time Franklin lived and build background knowledge of what it means to be an inventor.
- Share items within your classroom that were invented, such as eyeglasses, scissors, umbrellas.

Research Connection

A copy of the Declaration of Independence can be found at:

<https://search.archives.gov/search?query=Declaration+of+Independence&submit=&utf8=&affiliate=national-archives>

A copy of the Constitution:

<https://catalog.archives.gov/search?q=Constitution&rows=20>

Primary Source

The following are Ben Franklin's words as he described his swim fins invention.

Franklin wrote, in March 1773:

When a youth, I made two oval pallets, each about ten inches long, and six broad, with a hole for the thumb, in order to retain it fast in the palm of my hand. They much resembled a painter's pallets. In swimming I pushed the edges of these forward, and I struck the water with their flat surfaces as I drew them back. I remember I swam faster by means of these pallets, but they fatigued my wrists. I also fitted to the soles of my feet a kind of sandals, but I was not satisfied with them, because I observed that the stroke is partly given by the inside of the feet and the ankles, and not entirely with the soles of the feet.

Source: The Sporting Magazine, Vol. 11, 1799