



LESSON 7:

Guess What Benjamin Franklin Did!

OVERVIEW

Throughout his life, Benjamin Franklin was curious about the world around him and practical-minded in approaching problems. A visit to Franklin's Philadelphia home revealed his special knack for meeting needs with inventions: guests reported their fascination with such gadgets as the chair/stepstool, table/firescreen, and "long arm" pole for reaching books on high shelves. All of Franklin's discoveries and inventions, from his legendary kite and key experiment to his redesigned fireplaces, arose from his observation-based thinking and desire to improve daily life. Many of Franklin's creations are still used today.

This lesson illustrates for students the interrelationships among need, observation, and invention. Students are given facts about the circumstances that led to one of Franklin's inventions and then asked to guess what he invented.

OBJECTIVES

Students will:

- Explore how Franklin's scientific discoveries emerged from everyday experiences.
- Consider the origins and uses of Franklin's inventions.
- Learn that Franklin invented things commonly used today.

TIME

This lesson and activity require one class period.

MATERIALS

"Guess What Benjamin Franklin Did!" handout

McREL STANDARDS

Science

Standard 12. Understands the nature of scientific inquiry

Language Arts

Standard 8. Uses listening and speaking skills for different purposes

LESSON AND ACTIVITY

1. Introduction

Begin with a class discussion on science and scientists. You should mention these points:

- What is science? *Science is learning based on careful observation and experimentation. This is done through asking questions about our surroundings and trying to find the answers.*
- Who is a scientist? *A scientist is an investigator. Scientists look closely at their surroundings, ask questions about what they see, and try to answer their own questions.*
- Some scientists are famous. Benjamin Franklin was a famous scientist. Can you name others? (*e.g., Albert Einstein, Thomas Edison, Louis Pasteur, Marie Curie*)

- But most scientists are not famous. *In fact, we are all scientists. We are scientists because we observe the world around us; we ask questions and try to find the answers; and we want to make things work better.*
- How do we use science in our everyday lives? (e.g., *electricity, weather, computer technology, animal science*)

2. Activity

Distribute the “Guess What Benjamin Franklin Did!” handout. Introduce the activity as a way of learning about some items that Franklin invented to improve everyday life in the colonies. Be sure to mention that students will recognize Franklin’s inventions because we still use them today.

3. The activity can be performed individually or in pairs. Students should first cut out the cards on the “Guess What Benjamin Franklin Did!” handout. After turning all the cards face down on the desk, they should turn over two cards to try to find a match. If the cards don’t match, then they will turn them back over and try again until all of the inventions are matched with their descriptions.

4. After students have finished the “Guess What Benjamin Franklin Did!” activity, conclude the lesson by soliciting feedback about the students’ favorite Franklin inventions, items students were surprised to learn that Franklin invented, items Franklin invented that they have used, etc.

ASSESSMENT

Students are assessed on the extent to which they demonstrate understanding of scientific inquiry and its relevance to their own lives, on their ability to guess Franklin’s inventions based on the information provided, and on their level of class participation and contribution to discussion.

EXTENSION ACTIVITY

Students draw from their own observations to create an invention that will improve life for their families or their communities. Students describe their inventions in writing and then illustrate them, or they may even construct their inventions at home. The class holds an Invention Convention where students share their inventions with the class.

Guess What Benjamin Franklin Did!

DIRECTIONS: Cut out all of the cards. Turn them all face down on your desk. Then turn over two cards to try to find a match. If they don't match, turn them back over. Try again until all of the inventions are matched with their descriptions.

Benjamin Franklin had trouble seeing both near and far. He had two pairs of glasses, one with lenses for seeing up close and one with lenses for seeing far away. Benjamin Franklin grew tired of always switching his pairs of glasses.

Can you guess what Benjamin Franklin invented?



FRANKLIN STOVE

In colonial America, homes were very cold during the winter. People heated their homes with open fireplaces. This led to many house fires and burn accidents. The open fireplaces also burned a lot of wood and filled homes with smoke.

Can you guess what Benjamin Franklin invented?



LONG ARM

Guess What Benjamin Franklin Did! (continued)

Benjamin Franklin loved music. He played the violin, harp, and guitar and sang songs with friends. Benjamin Franklin liked the sound made by running a wet finger around the rim of a crystal glass.

Can you guess what Benjamin Franklin invented?



BIFOCALS

Benjamin Franklin loved to read and owned many books. At his home in Philadelphia, he stacked the books high on shelves. Benjamin Franklin could not reach books he wished to read.

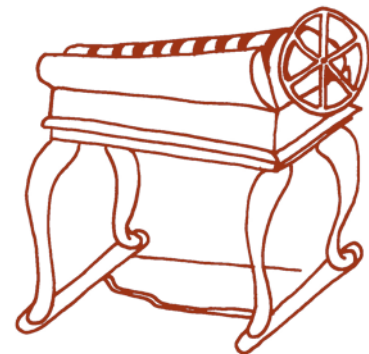
Can you guess what Benjamin Franklin invented?



SWIM FINS

When he was a boy, Benjamin Franklin loved swimming. He wished to swim faster and observe the fish around him.

Can you guess what Benjamin Franklin invented?



GLASS ARMONICA