



LESSON 8:

Designing Benjamin Franklin: In Search of a Better World

OVERVIEW

Throughout his life, Franklin's curiosity and hands-on approach to his surroundings attracted him to science or "natural philosophy," as it was then called. A true man of the Enlightenment, Franklin's reasoning was practical and observation-based, and he shared his theories in letters to international contemporaries and colleagues. Franklin firmly believed that scientific knowledge should directly benefit society, so he never patented his inventions and always sought useful applications for the theories he developed.

Assuming the role of museum curators, students will develop an exhibition devoted to Franklin and his scientific innovations. Working individually or collaboratively, students first will research Franklin's scientific pursuits and then break out into design teams. Each team will determine the exhibition's central interpretive theme and chart its physical layout. The final product can be presented on poster board or similar graphic material, or can be presented electronically, using a program such as Microsoft PowerPoint.[®] The activity concludes with each team presenting its exhibition to the class and the other students conducting a peer evaluation of it.

OBJECTIVES

Students will:

- Be introduced to Franklin's long list of scientific achievements.
- Perform basic research.
- Understand the use of primary and secondary sources.
- Collaborate on a group project.
- Present ideas in an organized, logical, and creative fashion.

TIME

The time required to complete this lesson and activity will vary widely and depend on the abilities of your students and the scale of their projects. You may allot class time to this activity regularly for a period of time, or you may begin it in class and assign its completion as homework.

MATERIALS

- "Benjamin Franklin Research Guide" handout
- "Exhibition Design Guidelines" handout
- "Exhibition Design Evaluation" handout
- Computers with Internet access
- Library resources on Benjamin Franklin
- Primary source materials, i.e., Franklin's writings
- Presentation graphics software (Microsoft PowerPoint[®])
- Poster board and art supplies

McREL STANDARDS

Language Arts

Standard 4. Gathers and uses information for research purposes

Science

Standard 11. Understands the nature of scientific knowledge

Standard 13. Understands the scientific enterprise

Technology

Standard 13. Understands the relationships among science, technology, society, and the individual

LESSON AND ACTIVITY

1. Begin class discussion by assessing students' appreciation of Franklin's accomplishments in the field of 18th-century science. Building on students' likely reference to the kite and key experiment, you may inform students that Franklin's work with electricity established him as one of the world's most famous scientists of his day. You may want to emphasize that Franklin's enduring interest in his physical world led to a quest to understand the laws of nature, which, in turn, led to an array of scientific innovations that held great practical benefits for society.
2. Distribute the "Benjamin Franklin Research Guide," and inform students that they will be conducting research into Franklin's scientific endeavors. At this stage of the activity, students already may be divided into exhibition design teams of three or four, or students may conduct their research independently, and then share their findings with their teams.
3. Distribute the "Exhibition Design Guidelines" to each exhibit design group. Explain that their assignment is to craft a museum exhibition around Franklin's scientific inventions and innovations. In groups, ask students to establish the overall goals and strategy for producing a project designed to honor Benjamin Franklin's genius and intellectual curiosity. The final product can be presented on poster board or similar graphic material, or can be presented electronically, using a program such as Microsoft PowerPoint.®
4. After all exhibitions are completed, each team will present its final work to the class.
5. Distribute the "Exhibition Evaluation" handout to all students. Encourage students to offer feedback after each presentation and allow team members to answer any questions that arise.

ASSESSMENT

Students are assessed on both the quality of their collaborative efforts and the extent to which their exhibitions display in-depth research, components organized around a central theme, mastery of language skills, images supplemented with text, and artistic style.

EXTENSION ACTIVITY

Students should write an essay in which they imagine spending a day with Franklin in the 21st century. They will speculate about what Franklin might think, say, and/or do when confronted with following:

- The Internet
- Cellular phones
- Contact lenses
- NASA and space exploration
- Napster

Benjamin Franklin Research Guide

DIRECTIONS: On a separate sheet of paper, write a thorough response to each question. If possible, find at least one primary source and one quotation from Franklin's writings to support each response.

1. Provide details on Benjamin Franklin's scientific activities and community contributions. Be sure to highlight how his work in each area affected those around him.
2. Describe Franklin's scientific methodology and his relationship with other scientists around the world.
3. Discuss the origins and purpose of the American Philosophical Society.
4. Discuss how Franklin's fame as one of the world's most prominent scientists enhanced his role as a diplomat and statesman.



Exhibition Design Guidelines

1. Imagine that you have unlimited funds and contacts to buy or otherwise obtain the things you need to ensure that your exhibition captures the genius and intellectual curiosity of Benjamin Franklin.
2. Be careful to show that your exhibition is based on thorough and accurate research of Franklin's scientific accomplishments.
3. Decide how your exhibition will communicate one central theme clearly and directly.
4. Choose a title that expresses the central theme of your exhibition.
5. Write an introduction to the exhibition that both educates and engages the public about the subject matter.
6. Identify three to five ideas that support the central theme. Those supporting ideas will translate into sections of the exhibition.
7. Select two to four images and/or objects for each section of the exhibition. Make sure these images and objects tie in with your exhibition text and enhance the messages your text conveys.
8. As you design this exhibition, ask this question: How does this section, introductory text panel, or object relate to the central theme of the exhibition?

Exhibition Design Peer Evaluation

DIRECTIONS: As each team presents its project, use this chart to evaluate the exhibition. You may write comments along with your score in the appropriate boxes or in the space at the bottom of the page. You may offer specific constructive criticism—but be generous with your praise, too!

	1 AVERAGE	2 GOOD	3 VERY GOOD	4 FRANKLIN FABULOUS
The exhibition displays thorough research of Franklin's accomplishments in science and scientific innovations.				
The exhibition utilizes text and images in a meaningful way.				
The exhibition is appropriate for a variety of age levels.				
The exhibition is both educational and entertaining.				
The exhibition conveys a strong, central theme.				
Overall, the exhibition displays thought, creativity, and collaboration.				

Additional Comments: _____