



***Modern Marvels: American Steel, Built to Last***  
Teacher's Guide

It was the material of the industrial age, bringing humankind into the wonders of the twentieth century. Skyscrapers, automobiles, modern weapons of war were possible because of it. American steel is symbolic of the economic might of American in the twentieth century. From Andrew Carnegie to Henry Ford, American steel enabled men to make fortunes and helped stimulate an economic boom throughout the United States. ***American Steel, Built to Last*** traces the story of the steel industry, introducing students to key events, personalities, and issues in the storied history of this valuable resource.

But how exactly is steel made? What is distinct about the American steel industry? This one hour documentary takes a look at the revolution and evolution of the American steel industry. Students will learn about the development of the steel industry and the innovative techniques used by the major U.S. steel companies. This program also explores the changing nature of the steel industry in the 21<sup>st</sup> century, giving students the opportunity to discuss the long-term fate of this important industry.

**CURRICULUM LINKS**

This program would be useful for American History and Culture, Science and Technology, Labor History and Economics courses. It is appropriate for 7<sup>th</sup> grade students and above.

**OBJECTIVES**

Students will examine the development of the American steel industry and its role in American history, culture and economic development. They will learn the processes by which steel is produced and how technology has changed methods of production since the 19th century.

**VOCABULARY**

Using the dictionary at [www.merriamwebster.com](http://www.merriamwebster.com), an Internet resource such as [www.history.com](http://www.history.com), or an encyclopedia, ask students to define or explain the significance of the following terms. They may also want to keep their own list of important terms or “words to know” as they are watching this program.

- [Amalgamate](#)
- [Anarchist](#)
- [Artisan](#)
- [Austere](#)
- [Coffer](#)
- [Epoch](#)
- [Fruition](#)
- [Juggernaut](#)
- [Lucrative](#)
- [Metallurgy](#)
- [Pleurisy](#)
- [Reticent](#)

### **DISCUSSION QUESTIONS**

1. The steel industry has played a significant role in American history. Discuss the impact and influence of steel on American history and culture.
2. Describe the process by which iron ore is converted to steel. What is the greatest challenge in producing steel?
3. Iron has been used for centuries. What were some of the early uses of iron in world history?
4. Early steel making was an artisan's trade. What is an artisan? How does an artisan differ from a factory worker?
5. What are the differences between cast iron and wrought iron?
6. Henry Bessemer's discovery revolutionized the steel industry. How did his discovery solve one of the greatest problems of steel production?
7. Andrew Carnegie was the most powerful steel manufacturer in the world. How did Carnegie come to dominate the industry?
8. Steel is now mass-produced. What does mass production mean? How does it influence economies? Can you give some examples of products that are mass-produced?
9. Many of the steel mills in America had company towns. What was a company town? Were they beneficial or harmful to steel workers?
10. What are some of the dangers workers faced in a steel mill?
11. What was the Homestead Strike and why was it such an important event?
12. What are some of the main ways technology has changed the steel industry? What do you think will be the ultimate fate of the steel industry? Will it continue?

### **EXTENDED ACTIVITIES**

1. Ask students to create a poster illustrating the process of steel making.

2. Working individually or in small groups, have students create mini-biographies of major players in the steel industry or the labor movement.
3. Ask students to research the Homestead Strike and write a 2-3 page synopsis of the strike and its significance. Students can also write a newspaper article about one day or event during the strike.
4. Have students write an op-ed about the fate of the steel industry in the 21<sup>st</sup> century.

### **BOOKS**

Carnegie, Andrew. *The Autobiography of Andrew Carnegie*, (Northeastern University Press, 1986).

Hakim, Joy. *History of US Book #8: An Age of Extremes*, (Oxford, 2002).

Lichtenstein, Nelson, et al. *Who Built America?: From 1877 to Present, Vol. 2*, (Worth, 2000).

Whitelaw, Nancy. *Homestead Steel Strike of 1892*, (Morgan Reynolds, 2006).

### **WEBSITES**

Background information about Andrew Carnegie:

<http://clp.carnegielibrary.org/research/pittsburgh/Carnegie/>

A helpful lesson plan about the Homestead Strike and its aftermath:

[http://edsitement.neh.gov/view\\_lesson\\_plan.asp?id=430](http://edsitement.neh.gov/view_lesson_plan.asp?id=430)

History and background info about the U.S. steel industry:

<http://www.uss.com/corp/company/profile/history.asp>