

Teacher's Guide

Industrial Technologies Greatest Human Achievements

Grade Levels:

5-12

Subject Areas:

STEM

Synopsis:

Up until the Industrial Revolution, technological progress seemed slow, but once scientists realized the potential of steam, progresses flew forward. From electricity and currents to steel and skyscrapers, our technological developments have allowed us to completely transform the world we live in.

Learning Objectives: Students will:

- Consider the impact of technology on different time periods
- Recognize the evolution of building
- Evaluate human responsibilities in terms of the environment

Vocabulary:

Industrial Revolution, Static Electricity, Alessandro Volta, Thomas Edison, Direct Current, Alternating Current, Nikola Tesla, Alfred Nobel, Hoover Dam

Pre-Viewing Discussion:

What happened during the Industrial Revolution?

How were skyscrapers made in the early 20th century? Why was it so dangerous?

Post-Viewing Discussion:

What was steam able to do?

How did electricity transform moving, building, and modern day life?

Describe the differences between an alternating current and a direct current. How did the debate between Tesla and Edison unfold? What are some of the controversial issues?

How did steel change the modern building?

What impact does the Hoover Dam have on the United States?

Further Activities:

Consider the Chrysler and Empire State Buildings. Find other buildings that have competed with one another for certain titles. Describe what happened.

Find pros and cons of Edison and Tesla's methods. Is one of them the "winner" of this famous scientific rivalry?