CCC! Streaming Media

Teacher's Guide

The Elements

Greatest Human Achievements

Grade Levels:
5-12

Subject Areas:
STEM

Synopsis:
The early alchemists and scientists were fascinated with pursuing gold and other elements. That obsession led to modern chemistry and the study of the atom, Isaac Newton and his Laws of Motion, and even Albert Einstein and splitting atoms.

Learning Objectives: Students will:

- Understand the early studies of the elements
- Consider the impact the atom has had on modern science
- Explore the contributions of notable scientists like Newton, Curie, and Einstein

Vocabulary:
Alchemists, Antoine Lavoisier, Marie Curie, Isaac Newton, Humphry Davy, Chemistry, Atoms, Electrons, MRI, Radium, X-Ray, Albert Einstein, Newton's Laws of Motion, Particle Physics, Large Hadron Collider, Protons, Theoretical Physics, Dark Matter

Pre-Viewing Discussion:
Can you name any elements and their functions? What are they?

What did Isaac Newton discover? How?

What are some of the downsides to scientific advancements?

Post-Viewing Discussion:
Who were the alchemists?

What are the pros and cons of radium? What happened to the woman that discovered it?

How did Newton make studying atoms possible?

How did Albert Einstein help advance the field of science?

What are physicists trying to do now?

Further Activities:
Further research the Large Hadron Collider.

Investigate how the atomic bomb was invented. Consider its impact on humanity. Weigh the pros and cons of scientific advancement.