



Albert Einstein Classroom Guide

Albert Einstein once said about himself, "I have no special talent. I am only passionately curious." It was Einstein's lifetime of passionate curiosity that profoundly changed the way people understand the physical world. Born into a Jewish family in Germany in 1879, Einstein was raised in Munich and then moved to Switzerland where he pursued an education and started a vibrant scientific career. When Hitler came to power in 1933, Einstein moved to the United States and in 1940 he became a U.S. citizen. From the Theory of Relativity to his famous mass/energy equation, $E=mc^2$, Einstein published over hundreds of both scientific and non-scientific works, and accomplished some of the most influential findings in several fields. His groundbreaking research in physics won him a Noble Prize and unparalleled respect from the scientific community and beyond.

Einstein lived through two World Wars and the Cold War, and witnessed the rise and fall of Nazism, Fascism and Communism. Einstein also played a critical role in establishing the Manhattan Project, which went on to develop the atomic bomb. Although he later campaigned against the use of nuclear weapons, Einstein recommended that the U.S. explore the development of the atomic bomb out of fear that the Nazi regime would develop the capability first. Greatly outspoken, Einstein described himself as a militant pacifist, claiming he would always fight for peace and humanitarian causes. Between his masterful scientific work and his role as a peace activist, Einstein is remembered as an icon of the 20th century.

Objectives and Curriculum Links:

Biography: *Albert Einstein* runs for one hour. It is appropriate for middle and high school students and would be an excellent companion to lessons related to the sciences, history, or international relations.

Vocabulary:

Using the dictionary at www.merriamwebster.com, an Internet resource such as www.history.com, or an encyclopedia, students should define or explain the significance of the following terms:

- Innovation
- Domineering
- Iconic
- Groundbreaking
- Disintegrate
- Pacifist
- Phenomenon
- Relativity
- Tranquility
- Ideology
- Outspoken
- Subversive

Critical Viewing Questions:

1. What was Albert Einstein like as a child? Why did his teachers assume he was a poor student? Did this surprise you?
2. What familial and cultural pressures affected Einstein's relationship with Mileva and their first child? Do these pressures still exist today?
3. What happened to Einstein's first marriage when he published his most famous papers in 1905? What does this say about the relationship between his professional and private life?
4. How did Einstein feel about World War I and World War II? Were these popular sentiments?
5. What natural phenomenon occurred in 1919 that proved Einstein's most significant theory? How was this a turning point for Einstein's career?
6. What was the Defiance Campaign? What was Albert Einstein's role within it? How did the government respond to this movement?
7. What was Einstein's role in the creation of the atomic bomb? How did he feel about his contribution?
8. Why was Albert Einstein suspected of being a communist?
9. Why do you think Einstein is considered an "icon"? Which of his contributions do you think is most important and why?
10. What was Albert Einstein's legacy when he died at the age of 76? What role did he play in the major historic during his lifetime?

Extended Activities:

1. Albert Einstein is considered to be one of the most important people in modern history. He once said, "Everything should be made as simple as possible, but not simpler." Research his greatest professional achievements, as well as critical events in his personal life. Write a children's book on this iconic figure, and include accurate biographical information, appropriate quotations from Einstein and photographs or drawings to further illustrate your work. Teachers may want to collect and display these books in a classroom "library" on this iconic scientist.
2. During the course of his 76 years, Albert Einstein lived through World War I, World War II and the Cold War. Even as a child, he had very specific opinions on international politics. Write a newspaper op-ed from Einstein's point of view, describing his views on

one of the major world events mentioned above. Use his writings and biographical information to discern his opinions on the subject.

3. Einstein's work in physics dramatically advanced the scientific understanding about our world. Choose another writer, scientist, musician, or inventor whose contributions changed their field of work forever. In the library or on the internet, research the background and accomplishments of the person you have selected to write about. In a 2-3 page biography of the historical figure you've chosen, explain the significance of their achievements. Compare and contrast your historical figure with Albert Einstein.

4. Einstein was one of the most important figures in world history, and he accomplished many things throughout his life time. Imagine that have been asked to create a resume for Albert Einstein. Research his background, accomplishments, and education history, and design a resume for this historic figure.

References

Websites

Special Bio Channel interactive site on the life of Albert Einstein:

http://www.biography.com/deathiversary/albert_einstein/albert_einstein.jsp

Noble Foundation biography on 1921 Physics Noble Prize Winner, Albert Einstein.

http://nobelprize.org/nobel_prizes/physics/laureates/1921/einstein-bio.html

Biographical on Albert Einstein from the Center for the History of Physics.

<http://www.aip.org/history/einstein/>

Time Magazine's profile on Albert Einstein.

<http://www.time.com/time/time100/scientist/profile/einstein.html>

Books

Einstein, Albert. *The World As I See It*. Filiquarian Publishing, LLC, 2007.

Isaacson, Walter. *Einstein: His Life and Universe*. Simon & Schuster, 2008.

Neffe, Jurgen. *Einstein: A Biography*. Farrar, Straus and Giroux, 2007.

Pais, Abraham. *Subtle Is the Lord: The Science and the Life of Albert Einstein*. Oxford University Press, 2005.