

Relatively Speaking: A Visit with Albert Einstein

Enrichment Works

Our Mission

Enrichment Works creates and presents theater to inspire learning.

Classroom Connections

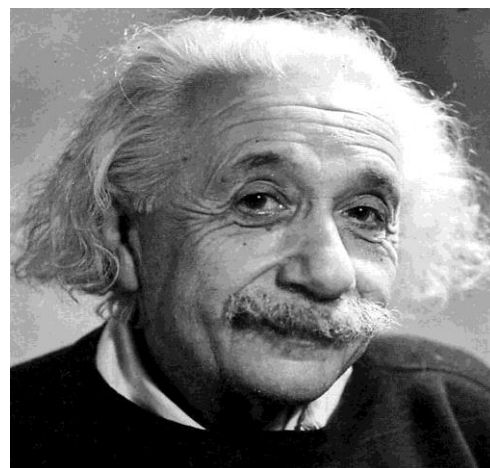
Synopsis

Albert Einstein welcomes the children to his study where he is working on his Unification Theory and begins to tell them of his life growing up in Europe while he conducts some science experiments to show them the basic principles underlying the universe.

Starting with magnets, he shows the relationship between the poles of the Earth and the needle of a compass. He then moves on to electricity and how the positive and negative ends of a battery move atoms around wires to power a light bulb.

Next is light and how prisms refract color, explaining why we see rainbows. Gravity is next, again with connections to the concept of magnetism. Finally, using a toy bus, he explains the relativity of time and space.

The demonstrations are interspersed with tales of European anti-Semitism, travels to America, winning the Nobel Prize and how his theories led to the atomic bomb and the end of World War II. He ends by encouraging the children to never give up in their efforts; or as he puts it, "Remember that imagination is more powerful than knowledge."



About the Artists

Steve Bean (Actor) Steve teaches Improv and Acting at The American Academy of Dramatic Arts in Hollywood, and Crafton Hills College in San Bernardino. His original one-man show "The Bean Team Anthology" was hailed by Daily Variety as "Awe-Inspiring!" He is familiar to young audiences from his appearances on Disney's "Good Luck Charlie" and Nickelodeon's "Sam & Cat." Other TV guest-star roles include "The West Wing" and "Justified."

Ian Patrick Williams (playwright) Mr. Williams won an Emmy for his play, *Bleacher Bums*, studied acting at the Goodman School of Drama in Chicago and was a member of the Organic Theater Company. Mr. Williams appeared as an actor in previous Enrichment Works plays including *Degas and the Dancer*, *Relatively Speaking: A Visit with Albert Einstein*, *Raiders of the Lost Tomb* and *Eco-Slam: Clean World Wrestling*. He has appeared in numerous films and tv shows, including *Chuck*, *Dexter*, *ER* and *Prison Break*.

Discussion and Writing Questions

- What do you hope will be discovered one day? How would you approach trying to discover something?
- Would you enjoy being a scientist? Why or why not?
- Are weapons sometimes necessary to keep us safe?
- Einstein said, "Imagination is more important than knowledge." What does that mean to you?

Project Ideas

Think of a major scientific discovery. Find out who discovered it and how? Write a story about this scientist and how their discovery impacted the world.

Light travels in a straight line. Your eyes "catch" the light and that's how you see. What happens when you look at a mirror? How does the light travel to your eyes? In a small group use a ribbon and a mirror to trace the path of light from a source to the mirror to your eyes. Then, explain what has happened in written words. See this page for details: <https://www.teachingchannel.org/videos/fifth-grade-light-lesson>

Einstein was also an inventor. The "Einstein refrigerator" was created by him and his former student, Leó Szilárd, in 1926. It can be used in places where electricity isn't available. That solved a problem. What problems should be solved today? Create a poster that shows: What is the problem? What invention can solve the problem and how? What scientific discoveries did (or do) humans have to make before the solution can be created? Is there a weakness to this solution? In other words, does the solution cause another problem?

Build an electric generator out of cardboard and other easily-found parts! Try this one: <http://amasci.com/amateur/coilgen.html>

Resources

Websites

Einstein Bio from American Museum of Natural History

http://www.amnh.org/learn/pd/physical_science/profiles/aeinstein.html

Einstein Quotes from BrainyQuote

http://www.brainyquote.com/quotes/authors/a/albert_einstein.html

PBS Learning: Einstein

http://www.pbslearningmedia.org/search/?q=einstein&selected_facets=

How Stuff Works: Compasses

<http://adventure.howstuffworks.com/outdoor-activities/hiking/compass.htm>

The Science of Light

<http://www.learner.org/teacherslab/science/light/>

Booklist

On a Beam of Light by Jennifer Berne

Dear Professor Einstein: Albert Einstein's Letters to and from Children by Alice Calaprice

Janice VanCleave's Electricity by Janice VanCleave

Energy Island by Allan Drummond

What Makes a Magnet? By Franlyn Branley

Vocabulary Words

Atoms

Antisemitism

Compass

Electron

Magnetism

Nobel Prize

Poles

Prism

Contact Us

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Standards and Learning

“Relatively Speaking: A Visit with Albert Einstein” introduces students to one of the most influential scientists of the 20th century. Einstein won the Nobel Prize for physics in 1921. This performance by Enrichment Works broadens the students’ understanding of his contribution to society by creating an emotional connection to the topic. The performance uses the Theatre Arts, Language Arts, History and Science Content Standards of California to introduce students to the scientific principles of the refraction of light and the Theory of Relativity as well as historic events including World Wars I and II and the effects of antisemitism on Einstein’s family. The play also addresses Einstein’s work as a peace activist and the conflict he experienced as he worked to create the atomic bomb.

Visual and Performing Arts Connections

1.0 Artistic Perception

Students will process, analyze and respond to sensory information through the language and skills unique to the theatre. They will learn theatrical vocabulary such as playwright, audience, director, setting, script, etc. They will observe a formal work of theatre and will analyze the elements of “Relatively Speaking: A Visit with Albert Einstein” by identifying who, what, where, when and why of the story.

2.0 Creative Expression

During the performance of “Relatively Speaking” students will observe the artist to see how emotional traits are portrayed. They will see how the playwright included scientific experiments into the story of the play. They will see how a character can directly address the audience and include them as characters in the story. They will see how a costume transforms a performer into a character.

3.0 Historical and Cultural Context

“Relatively Speaking” will help students understand the historical contribution of Albert Einstein and how the theatre can develop a cultural understanding. They will learn how one man’s discoveries can lead to changes in our understanding of how the world works. They will learn about the effects of prejudice and war on individuals and nations.

4.0 Aesthetic Valuing

Students will respond to, analyze and derive meaning from theatre arts. “Relatively Speaking” uses audience emotion to maintain a high level of connection to the story. Post-assembly activities provide the students with an understanding of the character and events. Students will be able to explain and show how the performer was able to portray emotions and feelings.

5.0 Connections, Relationship, Applications

Activities will be provided to the teachers to help them encourage students to connect what is learned in “Relatively Speaking” to other subject areas. Students will see how theatre arts can communicate information on history and society. Activities will enhance the desire of the students to read and write about this topic. Students will be enthusiastic about seeking out and enjoying additional literature related to Albert Einstein and “Relatively Speaking.”