



NATURAL SCIENCE CENTER OF GREENSBORO

Community Service Through Science

Discovery & Invention

Program Length: Approximately 45 minutes

Science Presentations

The Science Presentation you have scheduled is designed to help illustrate the science concepts taught in the classroom and to stimulate student interest in the subject matter.

Program Content

Discovery & Invention is a different kind of educational program done in the dramatic format of a fun theatrical trip to the past. Traveling through the centuries and around the globe in a time machine, students meet some of the figures whose findings helped get the modern world off the ground and headed toward the stars. Student volunteers will even get to portray these inventors in the history of science who have shown that, with discovery, "The Sky's the Limit." Starting with the ancient examination of seemingly empty air and ending with the Hubble Telescope, the travelers find how filled "the sky" is with forces which science has used to change our world and open windows to worlds beyond. Along the way, students encounter the cumulative nature and connectedness of scientific discoveries from different eras and areas of inquiry, doing classic experiments demonstrating principles of:

- Air Pressure
- Aeronautics, flight, and rocketry
- Astronomy
- Laws of motion (Galilean and Newtonian)
- Light and optics

The Destinations & Scientists

- 400 – Alexandria, Egypt Hypatia
- 1580 – Pisa, Italy Galileo
- 1654 – Regensberg, Germany Otto von Guericke
- 1666 – Lincolnshire, England Isaac Newton
- 1972 – Washington, DC George Carruthers

Other Scientists Mentioned

- James Watt
- Edwin Hubble
- Jocelyn Bell
- Jean Foucault
- Benjamin Banneker
- Caroline Herschel
- Mary Somerville
- Daniel Bernoulli
- The Wright Brothers
- Hero of Alexandria
- Robert Goddard

*Among those visited or mentioned are scientists showing the contributions of women and minorities to the story of discovery & invention.

Vocabulary

- orbit
- pendulum
- action/reaction
- Bernoulli principle
- prism
- gyroscope
- Doppler effect
- atmospheric pressure
- vacuum
- parabola
- ultraviolet light
- inclined plane
- gravity
- spectrum
- momentum

