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Galileo Brightens Star Parties at Douglas School



The sounds of a lilting Italian accent filled the Douglas gym recently when Galileo Galilei brought a lively astronomy demonstration to the first Acton **Star Party**, jointly sponsored by the [Acton Public Schools](#), the [Amateur Telescope Makers of Boston](#) (ATMoB) and Acton PIP. Switching between exclamations of "I'mma so excited" and "I'mma so confused," Galileo bounced around the gym and taught the 4th grade audience and their parents about his life, work, and adventures in astronomy.

Combining history with astronomy, [Paul "Galileo" Manning](#), in full costume, made the famous astronomer seem real. As he leaned against the gymnasium wall, he said "Galileo Galilei was born in Pisa, Italy on February 15, 1564." His father wanted him to study medicine "to make money," but Galileo was more interested in math and physics. While at the University of Pisa, Galileo began studying the pendulum. He watched a suspended chandelier swing back and forth in the cathedral of Pisa. Galileo discovered that the time it took a pendulum to swing back and forth depended on the length of the chain not the weight of the chandelier or the arc of the swing. Since medieval clocks were based on the pendulum, Galileo became very famous for standardizing time.

Galileo's most famous invention, however, was the telescope. Galileo modeled his telescope after the spy glass, which magnified objects three times. By placing convex glass at one end of a tube and concave glass at the other end of a tube, Galileo's telescope magnified objects twenty times. With this telescope, he saw ships on the horizon before anyone else. Again, he became very famous.

Galileo then pointed his telescope toward the stars, where he made some very important discoveries. He saw the craters on the moon and the four "stars" around mighty Jupiter. He watched the "stars" every night, discovered they moved in unusual ways, and realized they were moons revolving around Jupiter. With this discovery, Galileo rejected Aristotle's theory, which stated the sun revolved around the earth and embraced the Copernican system, which stated that the earth and other planets revolved around the sun.

Although this discovery made Galileo very happy, it made the reigning Pope very sad. During that time, the Pope was the authority in Europe and the Pope believed Aristotle's

theory. According to Paul "Galileo" Manning, "The Pope said don't talk, so I wrote a book!" Galileo's book, *A Dialogue Concerning the Two Great World Systems*, dismissed Aristotle's earth-centered system and proved Copernicus's sun-centered system.

Sadly, the Pope read Galileo's book and ordered him to stay in his home for the rest of his life. However, Galileo was allowed visitors. Paul "Galileo" Manning said, "The door swings both ways." Galileo invited his students to his home, encouraged them to "use your eyes, experiment, make proofs, and spread the word." Generations of Galileo's students spread the word and asked subsequent Popes to forgive Galileo and admit he was correct. Finally, in 1992, the current Pope, John Paul, forgave Galileo and admitted he was right.

Paul "Galileo" Manning closed the show with easy-to-follow constellation charts. He encouraged the crowd to join the astronomers with telescopes in the Douglas playground. Look at the Orion nebula, find the rings on Saturn, notice that stars come in blue and red and yellow. The constellation Cassiopeia looks like a W; Pegasus looks like a square. Follow Galileo's lead, "use your eyes and spread the word."

By Janice and Jesse Ward
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What is a Star Party?

A **Star Party** is a science event where Acton 4th graders and their families become astronomers for a night.

The initial Acton Star Parties were held on two nights (March 4 and 10) in 2003. Star Parties complement the 4th grade [Acton Public Schools \(APS\) curriculum](#). No 4th graders in the house? No problem. Find out about the [Acton Town Star Parties](#).

Attendees at the first Star Party were introduced to star gazing by a [Sky & Telescope](#) magazine representative before joining Galileo in the gym. Galileo gave the evening a historical spin, then encouraged the audience to join the astronomers outside to view the stars.

Behind the school, a dozen amateur astronomers equipped with telescopes shared their love of the night sky with the 4th graders and their families. The March sky delivered a spectacular show from Saturn's rings to the Orion nebula and storms on Jupiter. For a finale, the star gazers returned to the school for hot cocoa, snacks, and take-home [starfinder charts](#). Acton PIP founder and chairperson, Karen Herther, "hopes they will be an annual event."

To find out more [about Galileo](#) and astronomy, visit Paul "Galileo" Manning's site, www.spacemanning.net. Paul makes science, math, and history fun for the 3rd grade and up.