**Galileo Galilei**

*Renaissance Astronomer and Physicist*

Galileo Galilei was born in Pisa, Italy, on February 18, 1564, to a family of aristocratic lineage but average wealth. A lack of money forced him to leave school in 1585, and for four years he supported himself by tutoring students in mathematics. In 1589 he obtained a position lecturing at the University of Pisa, where he remained for three years, making discoveries that challenged the then-dominant view of physics, which was based on the ancient writings of the Greek philosopher Aristotle. Most famously, he discovered that two objects, dropped from the same height, fall at the same rate regardless of their weight. In 1592, he moved on to the University of Padua, where he would remain for more than fifteen years. He also did groundbreaking research in physics, discovering the law of inertia and paving the way for the work of Sir Isaac Newton in the 17th century.

Meanwhile, in the world of astronomy, a great debate was raging between the ancient system of Ptolemy, which placed the earth in the center of the universe, and heliocentric system of Copernicus, which posited the sun at the center, and the earth in an orbit around it. In 1609, after word came from Holland of the invention of the telescope, Galileo built his own version of the instrument. With this new tool, he observed the mountains and craters on earth's moon, and discovered four moons orbiting Jupiter. In 1610 he published *Sidereus Nuncius*, cataloguing his discoveries, and the book made him a celebrity in Europe.

Using new evidence provided by his telescope, Galileo now began to advocate strongly the Copernican theory. The Catholic Church, however, disapproved of heliocentricity, feeling that it was contrary to the statements in the Bible: if God created human beings as His supreme creation, He would place man at the center of His cosmos. In 1616 the Church sent Galileo formal warning that they considered his theory a denial of Christian doctrine. Thus he refrained from publishing anything about his theories for the next decade, but the ascension of a liberal Pope, Urban VIII, encouraged him to publish the *Dialogue Concerning the Two Chief World Systems* in 1632, which openly argued for the Copernican system. The Church now accused Galileo of heresy, tried him before the Inquisition, and forced him to renounce his views and submit to the Church.

Galileo lived under house arrest for the last eight years of his life. Yet he still continued to write: in 1638, he published his last work, a compilation of all his research into physics; it was published in Germany, because the Inquisition had forbidden the printing of any of his work in Italy. Galileo went blind in 1638 and died on January 8, 1642, at the age of seventy-seven.



 