

Galileo Galilei was born in 1564 in Pisa, Italy. He was the first of his family's six children. His father was a well-respected musician and music theorist. Galileo inherited from his father a love of music, and was also accomplished as a lutenist. In his young adulthood, Galileo considered entering the priesthood. However, he was convinced by his father to pursue an education in medicine at the University of Pisa. While studying for a medical degree, Galileo was struck by the rhythmic consistency of a swinging pendulum. He devised his own experiments and found that pendulums of the same length swing in time, regardless of the size of their sweep. He then accidentally attended a lecture in Geometry, leading him to begin studying mathematics instead of medicine. In 1589, he became the chairman of Mathematics at the University of Pisa. Two years later, he moved to the University of Padua, where he would contribute widely to science until 1610. Outside of Astronomy, he made huge contributions in Optics (he invented the first effective telescope), Kinematics, and Strengths of Materials. In 1619, he became embroiled in a debate over the nature of comets. Although Galileo ended up being wrong about comets, this debate drove him to write *The Assayer*, a book where he lays out his thoughts about how science should be conducted in general. In particular, he states that science should be conducted without the use of philosophy and metaphysics and be based more closely on observation. He dedicated this work to the Pope at the time, earning him great favor. It was through this favor that Galileo was given papal permission to write a book detailing arguments for and against heliocentrism. In his book *Concerning the Two Chief World Systems*, published in 1632, he does not do this. He clearly argues for a heliocentric model of the Solar System. Because of this, Galileo was placed on house arrest by the Inquisition. His book was still circulated, although illegally, and he was still able to have visitors and send letters. He died in 1642, still imprisoned in his home.