

Galileo's Influences on Discoveries

Galileo Galilei is often referred to as the father of modern science and the founder of modern mathematics. His discoveries lead to eventual changes in thinking and challenges to previous theories proposed by Aristotle and beliefs held sacred by the Catholic Church. Galileo's work helped future mathematicians and scientists develop their ideas further.

Contributions to Science

Galileo made many contributions to modern science. One of his most famous is the theory of falling bodies. Galileo challenged the previously accepted Aristotelian theory that a body will fall in proportion to its size and weight. After mathematical research and work with inclined planes and pendulums, by 1604 Galileo had finalized his theory. He stated that a body will move along a flat surface, at a constant speed unless it is disturbed.

The Telescope

Galileo's discoveries in astronomy lead to further improvements on the telescope. In 1609, while Galileo was writing his mathematical treatise on motion, he received news that the Dutch had created a telescope. This inspired Galileo to the point where he put aside his current work and began creating his own series of telescopes. Galileo had, by the end of that year created a 20-powered telescope that could enable a person to see unknown planets, the stars of the Milky Way and lunar mountains. It was when Galileo published his findings that further improvements to the telescope were made. Despite the controversy his finding caused, other scientists created their own telescopes that were able to prove Galileo's findings.

Astronomy and Conflicts with the Church

One of Galileo's most important contributions to astronomy was his evidence in support of Copernicus' theory that the Earth and other planets revolve around the sun. The church was against this theory believing in a stationary Earth. Galileo argued first for freedom of inquiry but it was denied. He eventually was put under house arrest for his findings. This was a life sentence for suspicion of heresy.

Galileo's Students

Galileo's discoveries went on to inspire and influence the work of future scientists and mathematicians. One of Galileo's most well-known students was Bentito Castelli, who is the founder of modern day hydraulics. Casteli was the teacher of Bonaventura Cavalieri. Cavalieri formulated many of the principles that are important in calculus.