

## Galileo Scavenger Hunt

Galileo Galilei is referred to as the father of modern experimental science. He was an astronomer, mathematician, and physicist. Learn more about Galileo on the World Book Web and then find the answers to the following questions!

### Find It!

1. What important philosopher did Galileo study while at the University of Pisa?
2. What discovery did Galileo announce in his paper *The Sidereal Messenger*?
3. Which astronomer did Galileo most closely agree with, Ptolemy or Copernicus?
4. Explain the law of the pendulum.
5. Explain the law of falling bodies.
6. What invention finally confirmed Galileo's law of falling bodies?
7. Why did the Inquisition imprison Galileo for life?
8. What was different about the way Galileo communicated his findings from other scholars of the day?
9. When did the Catholic Church admit they had been wrong in condemning Galileo?
10. What famous scientist used Galilean relativity, as described in Galileo's *Dialogue Concerning the Two Chief World Systems*, to create his own theory of general relativity?

### Did You Know?

- ◆ Legend has it that Galileo proved his law of falling bodies by climbing to the top of the Leaning Tower of Pisa and dropping two cannon balls, one large and one small. Although the story is most likely not true, such a demonstration would show that his theory was correct.
- ◆ Based on Galileo's ideas about pendulums, Dutch scientist Christiaan Huygens created the first pendulum clock in 1657.
- ◆ In 1989, NASA launched a space probe to observe Jupiter, its rings, and its moons. They named it Galileo, after the astronomer who discovered Jupiter's first four moons.

### Learn More!

- ◆ Galileo is not the only scientist in our history who has tried to explain the workings of our universe. Read this Special Report about the history of Cosmology.  
<http://www.worldbookonline.com/student/media?id=sr394019>
- ◆ See a picture of NASA's Galileo space probe!  
<http://www.worldbookonline.com/student/media?id=pc202449>
- ◆ Galileo didn't just make achievements in the fields of physics and astronomy. He also played a role in the development of experimental science. Learn about Galileo's influence on the scientific method.  
<http://www.worldbookonline.com/student/media?id=sr400008>

## Answer Key

1. Aristotle
2. The Medicean Planets- the four moons of Jupiter
3. Copernicus
4. Pendulums of equal length swing at the same rate whether their arcs are large or small.
5. All objects fall at the same speed, regardless of their mass; and while they are falling, their speed increases uniformly.
6. The invention of the air pump around 1650 allowed for a vacuum, which confirmed Galileo's law of falling bodies.
7. He violated the Inquisition's previous order not to hold, teach, or defend Copernican theory.
8. He wrote in easily understandable Italian rather than Latin.
9. In 1992, Pope John Paul II agreed that the church had been wrong in condemning Galileo.
10. Albert Einstein