

### 33. Galileo's Vision by David White

**A** It was a clear night in 1610 when Galileo Galilei looked through his telescope and saw the four closest moons of Jupiter. They were only dots in the sky, but they were there.

**B** It was quite a discovery. In fact, the moons Galileo saw were the first moons other than our own moon that anyone had ever seen.

**C** Now, Galileo didn't invent the telescope. Hans Lippershey of Holland did in 1608. He designed it so people could look at things far away. But Galileo was the first to use a telescope to look at stars and planets.

**D** Using the telescope, Galileo also discovered that our moon was not the perfect, mysterious sphere everyone thought it was. He proved that the moon was filled with craters. He also proved that the light that seemed to be coming from the moon was actually a reflection of light coming from the sun.

**E** Galileo was also the first scientist to prove a theory by testing it and recording results. Until that time, scientists would prove their theories by making arguments without giving evidence.

**F** Galileo was the first to provide visual evidence in support of the theory that Earth revolves around the sun. A man named Copernicus of Poland had written in 1543 that Earth was not the center of the universe. He had said that the sun was the center of what we call the solar system and that Earth circled the sun. Not many people believed



him. Teachings until that time had placed Earth firmly at the center of the universe, with everything else revolving around it.

Galileo, night after night, saw the moons of Jupiter at different points in the sky. It was clear that they were circling Jupiter, not Earth. What Galileo saw helped prove Copernicus's theory.

**G** Astronomy has come a long way since 1610. We now know that Jupiter has at least 16 moons. We know that our own solar system has nine planets. We know that seven of those planets have moons. We know that the universe contains other solar systems like ours. We have telescopes searching the night sky for signs of life.

Thousands of people now do what one man started on a hill in Italy almost 400 years ago.