

Galileo



¹ Vincenzio Viviani sat with his teacher to begin an interview for the biography he was writing. Galileo, now blind, was reviewing his life with his pupil.

² "I have been in this home for four years now," said Galileo. "I am condemned for believing in Copernicus's teaching that the sun, not the Earth, is the center of the universe. I am grateful to have you here with me as a student and a friend."

³ "And I am grateful for what I have learned from you," said Vincenzio. "Please tell me the story of the telescope again."

⁴ "I was given this spyglass," said the old man, holding up a small scope.

⁵ "It can magnify things three times, but I wanted to see the stars. So I improved it and developed this one," said Galileo, pointing to a much larger version of the spyglass.

⁶ "With the larger telescope, objects are magnified more than twenty times," he said with pride in his voice. "I was able to look at the moon and see its mountains and valleys. I discovered that Jupiter had four moons orbiting around her. That was an amazing discovery for me. It convinced me that the Earth was not the center of everything, as has been taught for more than a thousand years. Because the four moons revolved around Jupiter, I knew that not everything revolved around the Earth. Then I was able to verify the phases of Venus. The shadows that crossed over Venus showed that the sun was the center of our universe, not the Earth," Galileo finished.

⁷ "Tell me about the sun," said Vincenzo. "What did you learn about it?"

⁸ "I learned about the spots on the sun. By observing the movement of the sunspots, I discovered that the sun rotates just like the planets. Alas, I spent too much time studying the sun through the telescope, and that is why I have become blind," said Galileo. "When I told people about my discoveries, many of them did not like these new ideas about the universe. That is why the church has made me a prisoner in my own home."

⁹ "Yes, I know," said Vincenzo, feeling sad for his teacher. Then he asked, "Can you tell me about the swinging lamp?"

¹⁰ "Why, yes, I can. I was a student at the university in Pisa. My father wanted me to study medicine, but my interests were in mathematics and philosophy," began Galileo. "One day I was in the cathedral at the university. A breeze was blowing through, and a lamp, hanging from the ceiling by a long chain, was swinging back and forth. This intrigued me and I used my pulse to time the swings. I found that each time the lamp swung back and forth, it took the same amount of time. Later, I experimented with a pendulum made from a weight on the end of a string. Again, I discovered that the long and short swings took the same amount of time. It was not until recently that this discovery led me to work on a clock to keep time. My son and I are still trying to perfect it."

¹¹ "I have seen your work on the clock. It is wonderful," said Vincenzo. Then he said, "I'd like to take some notes on your other inventions. Let's continue with them."

¹² "Let me see," said Galileo, putting his finger to his temple. "Well, there is the thermoscope that measures temperature. And there is the pump that raises water levels. It is used for irrigating the fields. Also, the geometrical compass which is used to help solve mathematical problems. And, of course, I wrote the handbook to show how to use the compass," Galileo stated. "I have always enjoyed solving problems, and my curiosity has kept me busy for many years."

¹³ "Your curiosity has helped you make many contributions to the world, my friend," said Vincenzo. "But, you seem tired; do you want to stop for now?"

¹⁴ "Yes, I think I need to rest. We can continue later," said Galileo. "Can you lead me to my bed?"

¹⁵ "Yes, I'd be glad to," said Vincenzo rising from his chair to help Galileo walk across the room and lie down.

¹⁶ "You rest now," said Vincenzo, looking fondly at his teacher and his friend.

¹⁷ "Thank you," said Galileo as he closed his eyes to sleep.