

33. Galileo's Vision by David White

A ¹It was a clear night in 1610 when Galileo Galilei looked through his telescope and saw the four closest moons of Jupiter.

²They were only dots in the sky, but they were there.

B ³It was quite a discovery. ⁴In fact, the moons Galileo saw were the first moons other than our own moon that anyone had ever seen.

C ⁵Now, Galileo didn't invent the telescope. ⁶Hans Lippershey of Holland did in 1608. ⁷He designed it so people could look at things far away. ⁸But Galileo was the first to use a telescope to look at stars and planets.

D ⁹Using the telescope, Galileo also discovered that our moon was not the perfect, mysterious sphere everyone thought it was. ¹⁰He proved that the moon was filled with craters. ¹¹He also proved that the light that seemed to be coming from the moon was actually a reflection of light coming from the sun.

E ¹²Galileo was also the first scientist to prove a theory by testing it and recording results. ¹³Until that time, scientists would prove their theories by making arguments without giving evidence.

F ¹⁴Galileo was the first to provide visual evidence in support of the theory that Earth revolves around the sun. ¹⁵A man named Copernicus of Poland had written in 1543 that Earth was not the center of the universe. ¹⁶He had said that the sun was the center of what we call the solar system and that Earth circled the sun. ¹⁷Not many people believed



him. ¹⁸Teachings until that time had placed Earth firmly at the center of the universe, with everything else revolving around it.

¹⁹Galileo, night after night, saw the moons of Jupiter at different points in the sky. ²⁰It was clear that they were circling Jupiter, not Earth. ²¹What Galileo saw helped prove Copernicus's theory.

G ²²Astronomy has come a long way since 1610. ²³We now know that Jupiter has at least 16 moons. ²⁴We know that our own solar system has nine planets. ²⁵We know that seven of those planets have moons. ²⁶We know that the universe contains other solar systems like ours. ²⁷We have telescopes searching the night sky for signs of life.

²⁸Thousands of people now do what one man started on a hill in Italy almost 400 years ago.

DIRECTIONS: Choose or write the best answer to each of the following questions using the evidence presented in the passage. When required, list specific sentence numbers or paragraph letters from the story to support your answer.

- 1. Which of these best explains why people before Galileo hadn't seen moons around Jupiter?
 - A. They hadn't looked in the right place.
 - B. They hadn't turned the telescope toward the night sky.
 - C. They thought Jupiter didn't have moons.
 - D. They thought Earth was the center of the universe.

Give the number of the sentence that best supports your answer. ____

- 2. Which of these words best describes the process that Galileo introduced to scientific theory?
 - A. visualization
 - B. determination
 - C. argumentation
 - D. experimentation

Give the number of the sentence that best supports your answer. ____

- 3. The author's purpose in writing this passage was probably
 - A. to discuss modern astronomy.
 - B. to show how to use a telescope.
 - C. to prove Galileo's theories about the universe.
 - D. to show Galileo's contributions to science.
- 4. Scientists before Galileo proved theories by making arguments. This kind of proof can best be described as
 - A. theoretical.
 - B. historical.
 - C. natural.
 - D. technical.

- 5. Compare the two scientific theories described in paragraph F.

- 6. Explain one way that Galileo changed the way people thought about the Moon.

Give the letter of the paragraph that best supports your answer. ____

- 7. Which of these statements about the passage is an opinion?
 - A. The moon is filled with craters.
 - B. Galileo put the telescope to good use.
 - C. Galileo discovered four moons of Jupiter.
 - D. People didn't believe Copernicus's theory at first.