

Discussion Question Answer Key

Maria Mitchell: Pioneering American Astronomer

1. In what ways did Maria Mitchell's upbringing differ from most girls in the 1800s?

She was a Quaker, and her parents believed girls should be educated the same way as boys.

2. What kind of education did Mitchell have?

She attended private elementary schools from the age of 4. After age 9, she was taught in her father's school until he closed it in her early teens. Then she attended the Cyrus Pierce School until she was sixteen. After that, she taught in the Cyrus Pierce school for a year, before opening her own school (which only lasted a year). She then got a job at the Nantucket Athenaeum (library), where she taught herself from the books there.

3. With what instrument(s) did she make her discovery?

She made observations with a small 2-inch reflecting telescope, chronometer (watch), and sextant.

4. How did Maria know what she had discovered?

The "fuzzy dot" she saw was not on any of the astronomical charts she studied, and she hadn't seen it in previous observations. Therefore, it must be a new object.

5. Why was Maria's discovery significant?

This was the first time someone had seen a comet that could not be seen with the naked eye. It was also one of the first times an American was recognized for contributions to astronomy over a European.

6. What sorts of honors did Mitchell receive?

She received a gold medal from the King of Denmark (an astronomer himself). She was the first woman to be elected to the American Academy of Arts and Sciences (in 1848) and the American Association for the Advancement of Science (in 1850). She got a job at the U.S. Nautical Almanac to calculate the motions of Venus.

7. How did people react to a woman as a professional astronomer?

She became world-famous and many people sent her letters of congratulations.

However, when she visited Europe and met other European astronomers, she was not allowed in the Vatican Observatory because she was a woman.

8. What sorts of jobs did Maria Mitchell have in her life?

She was a teacher (at the school she founded as well as others). She was the town librarian. She worked for the Nautical Almanac making calculations. She was the first Professor of Astronomy and Director of the Observatory at Vassar College.

9. What causes did Mitchell support?

She championed women's rights to vote and especially to be involved in science at the professional level.

10. What do you think is Maria Mitchell's legacy?

Answers will vary.