

THE HISTORY CHANNEL CLASSROOM STUDY GUIDES

Modern Marvels

Observatories: Stonehenge to Space Telescopes

Humankind has always been a race of stargazers. Even before the invention of the wheel, primitive cultures built great stone monuments to record the movements of the heavens. But in the last century, a handful of pioneers have learned more about the wonders of the universe than all the dreamers before them could have ever imagined. *Observatories: Stonehenge to Space Telescopes* tells the story of men and women who battled public ridicule in the quest to unlock the secrets of the cosmos.

It would be useful for classes on American History, Science and Technology, American Culture, and Astronomy. It is appropriate for middle school and high school.

- [abyss](#)
- [barbarity](#)
- [benign](#)
- [celestial](#)
- [clarity](#)
- [converge](#)
- [heresy](#)
- [hubris](#)
- [hyperbole](#)
- [incapacitated](#)
- [inquisition](#)
- [optics](#)
- [perilous](#)
- [pessimist](#)
- [pinnacle](#)
- [ravage](#)

Discussion Questions

1. Humankind has tried to solve the riddle of the creation of the universe throughout history. Why is humankind so fascinated with astronomy and the study of the heavens?
2. The telescope enabled humankind to see beyond its own world. How was the telescope invented? How did it contribute to the study of the stars?
3. When Galileo discovered that the sun, and not the earth, was the center of the galaxy, he was persecuted by the Catholic Church. Why was the Catholic Church so angry and frightened by Galileo's discovery?
4. George Hale was a brilliant scientist who was plagued by mental illness. How did his illness affect his life and work?
5. Although humans have built observatories throughout history, the most startling advances came in the twentieth century. How did the technological advances of the twentieth century improve observatories?
6. Edwin Hubble is credited with the discovery that ours is not the only galaxy in the universe. How did Hubble arrive at this theory?
7. What is the Big Bang Theory? How does it contribute to our knowledge of the formation of the universe?
8. George Hale's giant telescope at the Palomar observatory took over a decade to create. What were some of the obstacles faced in the creation of this scientific wonder?
9. What were some of the problems that plagued the Hubble telescope?

10. How has the Hubble telescope added to our knowledge of the universe?

Extended Activities

1. Create a poster that illustrates the progression and evolution of observatories.
2. Create a timeline that chronicles the world events during the creation of Hale's telescope at the Palomar observatory.
3. Create a poster that illustrates and explains the Big Bang Theory of the origins of the universe.