

Summer Assignment: 11th Grade Grade Level
2020-2021

Your summer assignment focuses on new scientific discoveries and the challenges they posed to the established hierarchies of the Catholic Church and Feudalism. The focus of this assignment is on **heliocentrism**, the belief that the sun is at the center of the solar system, and the planets revolve around it. There are two parts to this assignment: a reading assignment and a documentary. For each part, answer the questions in writing in full sentences. USE YOUR OWN WORDS. They will be collected on the first day of class.

If you have any questions, please contact Mrs. Scheinmann (rscheinmann@jbha.org)

Part I. Excerpts from *The Scientific Revolution* (from the Captivating History series)

https://drive.google.com/file/d/1sC8f17Adz2tHCRdjNdyRG_9qUjJUXDX/view

https://drive.google.com/file/d/1-Awg_KKO3oWjsB04eDuFmvJXW5jmqogW/view

1. Explain how each of the following contributed to the development of scientific knowledge and thinking:
 - a. Ancient Greece and Rome
 - b. The Dark Ages
 - c. The Renaissance
2. For each of the scientists in the reading:
 - a. Give a brief biographical background (where and when did they live? What was their family like? What was their education and occupation(s)?)
 - b. What were their main scientific discoveries? How did they make their discovery?
 - c. How did they change our understanding of the universe?
 - d. Were they or their discoveries controversial in their time? Explain.

Part II. *Galileo's Battle for the Heavens* <https://www.youtube.com/watch?v=XCxkdR092c4>. A transcript is available here: https://www.pbs.org/wgbh/nova/transcripts/2912_galileo.html

1. Why were people in Galileo's time so sure that the sun, moon, and planets all moved around the Earth?
2. Why did Galileo think mathematics was important?
3. What was the significance of Galileo's telescope? What other discoveries did it lead to?
4. Why did Galileo put his daughters in a convent? What was their life like there?
5. Why did Galileo start to face opposition?
6. Who was Cardinal Bellarmine? What was Galileo's relationship with him?
7. Why was Galileo's discovery of sunspots important?
8. Who was Urban VIII? What was Galileo's relationship with him?
9. Why did the Church go after Galileo?
10. What kinds of discoveries did Galileo make after his sentencing?