

ESSP Critical Thinking Questions for *Coming of Age in the Milky Way*

1. What were some of the practical motives/incentives for people(s) to study the motions of the planets and stars?
2. What marked the beginning of the end of our cosmological childhood?
3. How did Aristarchus “Raise the Roof?”
4. How did the great navigators contribute to the moving of science (astronomy) forward? Give some examples.
5. Suppose you were to interview Nicolas Copernicus, Johannes Kepler, Galileo Galilei, and Sir Isaac Newton. Choose one of them and discuss how you think he would respond to the question, “What was your most significant contribution to humankind?”
6. Which of the four individuals mentioned above do you think is most significant and why?
7. How did triangles help directly measure the distance to the planets, the Sun, and eventually the stars?
8. Why are Cepheid variable stars more useful tools for astronomers than other types of stars? What did they have to do with our understanding of the “island universes”?
9. Why does gravity have a speed, and what is it?

Pre-Course Work

10. Explain the irony of Georges Lemaître's role in the study of cosmology.