

3rd edition Cosmos

Chp 1 Reading Guide - **Read** the chapter and then answer the questions

Peering through the Universe

1. Light has a finite speed. What is it? Make a graphic to show the differences in time that it takes light to reach us from the three examples mentioned.

Keeping Track of Space and Time

2. Explain how a light year is a unit of length even though the term “year” appears in it.

How do we study things we can't touch

3. How are images in Figure 1-3 related?

Finding constellations in the sky

4. What is Figure 1-7 trying to explain?
5. The Andromeda Galaxy is one of the nearest galaxies. So why is it farther away than the stars we see?
6. Can you pick out Cassiopeia and the Summer Triangle on pg 7?
7. What is the name of the brightest star and what constellation is it in?
8. If you follow the arc of the handle of the big dipper [you can also use your star chart – follow the handle from the bowl to the tip of the handle] you will get to, or “arc” to what star?

How do you take a tape measure to the stars

9. After reading this section, what can you say about our ability to measure distances in space?
10. Read through pages 12, 13, and 14. What impression does this “closer look” leave with you?

The Value of Astronomy

11. Why is the study of astronomy important to you?

Origins

12. Which of Nasa's Origins' three program goals is the most important or interesting to you? Explain.

What is science

13. Sometimes we go through school and get the impression that science is very cut-and-dried, that everything is very well established. After reading this section would you agree with this impression?

Science and Pseudoscience

14. How are astronomy and astrology different? Why is it so important to scientists (especially astronomers) to make the distinction that astrology is not science?

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