COURSE STUDY GUIDE FOR UNIT 1

This course is broken up into 6 units. Each unit will conclude with a test. This handout contains material relevant to Unit 1. Future handout(s) will contain other units.

Most of the Study Guide is a list of useful review questions & “common misconceptions” from The Cosmic Perspective, 5th edition. Some numbers refer to question numbers at the end of the chapters, while others refer to page numbers where the indicated item can be found. For the questions at the end of the chapter, underlined numbers refer to more conceptual questions, and more closely resemble test questions. Non-underlined numbers refer to more factual (or vocabulary) questions which, while less likely to be on tests, are important because you need to understand some facts and vocabulary to help understand certain concepts. See also Course Goals #6 & #8.

References below to a “Course Goal” refer to items on the “Course Description, Course Goals, and Expected Student Learning Outcomes” handout. I hope that everything we do together and everything I recommend you do on your own helps you attain the knowledge or goal(s) listed. As always, your thoughts or feedback on matters like these are welcome and appreciated.

Unit 1 – Universe overview, scale models, motions.
Test 1: week 4 of class. Don’t forget to make a 3x5 handwritten notecard for the test.

Useful reading, questions, and activities
Chapter 1 – Universe Overview, scale models, and motions
  Short answer: 3, 4, 5, 6, 7, 8, 10, 14
  Test understanding: 15, 16, 17, 18, 21, 22, 23, 24
  Quick Quiz: 25, 26, 27, 28, 29, 32, 33, 34
  Think about it page 17.
  See it for yourself page 8.
  Common Misconceptions pages 7, 13

  Lecture Tutorials: Milky Way Scales (p. 123), Looking at Distant Objects (p. 131),
  Expansion of the Universe (p. 133)

  Course goals for this chapter: 1, 2, 4, 5, 6, 7, 8. (See syllabus pp. 4-5 for the goals.)

Don’t forget to make a 3x5 handwritten notecard for test #1

Course Study Guides for future units will be handed out separately.

On the back is a page of notes that I used for the planetarium show that we did during the first week. There is more helpful information there.
Things you should learn/remember from the planetarium show

The planetarium show covers several topics in chapters 1 and 2 of the book. So, while it may have been fun, there were some things I expect you to learn from it.

The following are from chapter 1.

- Concept of light year and consequences of things being far away (pages 7-9)
- Definitions (page 2 & 6) and distance (pages 9-14) to the Moon, Sun, general distances to planets, stars, and galaxies.
- Why is the north star special (pages 15-16)
- Motions in the sky (pages 15-19)

The following are from chapter 2.

- What are constellations (pages 28-29)
- What is the Milky Way and what does it look the way it does (page 30)
- Why do stars rise and set (pages 31 & 33)

Fun stuff

Zodiac signs. See web page also for your true zodiac sign. We will also discuss this at the end of our “seasons” portion in astronomy 20 (but not astronomy 25). For a sneak peak, look at pages 41-42 about precession & Sun signs.

Strongly recommended bonus reading:

- Pages xxiv-xxv, How to Succeed in Your Astronomy Course

Interesting reading

- Pages xxvi-xxviii, Forward: The Meaning of The Cosmic Perspective

From California Science Standards, grade 3

- Students know the patterns of stars stay the same, although they appear to move across the sky nightly, and different stars can be seen in different seasons.
- Students know the position of the Sun in the sky changes during the course of the day and from season to season.