

Astronomy

Study Guide: Chapters 27 and 26, *Conceptual Physical Science*, 4th edition

Objectives: When you finish this unit you should be able to:

- Define cosmology.
- Give a brief history of the development of cosmology and a summary of our best ideas as of today.
- List and explain the major stages in the life of stars. Explain the various paths that “old age” stars have.
- Define the term constellation. List the names of several constellations. Be able to identify 3 major constellations in the night sky.
- Describe and sketch the Hertzsprung-Russell diagram.
- Define the term galaxy and list the various types.
- Describe the motion of the earth and relate this motion to the seasons of the year.
- Describe the motion of the moon and relate this motion to the phases of the moon. Describe a solar eclipse and a lunar eclipse. Describe the positions of the moon in high and low tide.
- State the order of the planets from the sun out, and describe their relative distances from the sun. Define terrestrial and Jovian planets and name each. Explain how Pluto is now classified.
- Define the terms astronomical unit, ecliptic, eccentricity, retrograde, asteroid, comet, meteoroid, meteor, meteorite, Kuiper Belt, Oort Cloud.
- Give information about the planets covered on worksheets and in the text. Be able to identify the planets in the night sky.

Activities:

- Read chapters 27 and 26.
- Chapter 27: Mentally answer review questions 1, 2, 4, 5, 7, 8, 9, 11, 12, 13, 14, 16, 19, 20, 24 and exercises 2, 7, 8, 14, 16, 18, 20, 22, 23, 32, 35 starting on page 745.
- Chapter 26: Mentally answer review questions 1, 2, 3, 6, 10, 21, 22, 23, 24, 25, 26, 27, 28 and exercises 8, 13, 25, 26 starting on page 714.
- Web site worksheet on the planets
- Lab and hallway demo on scale model of solar system
- Lab on the phases of the moon and the tides
- Visit to the planetarium, “A View of the Night Sky”