Chapter 10 States of Matter

Chapter Opener

__**Chapter Overview, TE** Review the objectives listed in the Student Edition.

Section 1 The Kinetic-Molecular Theory of Matter

PACING: 45 minutes

PENNSYLVANIA ACADEMIC STANDARDS FOR SCIENCE AND TECHNOLOGY:
3.1.B.1 Distinguish between different types of models and modeling techniques and apply their appropriate use in specific applications;
3.1.C.3 Examine and describe physical patterns in motion;
3.4.A.4 Describe phases of matter according to the Kinetic Molecular Theory;
3.4.B.4 Use knowledge of conservation of energy and momentum to explain common phenomena.

Objectives

1. **State** the kinetic-molecular theory of matter, and describe how it explains certain properties of matter.
2. **List** the five assumptions of the kinetic-molecular theory of gases. Define the terms ideal gas and real gas.
3. **Describe** each of the following characteristic pr

membranes are __FOLDED_____ with a very large surface area. These ruffles are called _CRISTAE_____. Mitochondria have their own ____DNA_ and manufacture some of their own _PROTEINS_____. Draw a picture of the mitochondrion with its membrane cut.

plasmic
iculum
ER)

5. **Endoplasmic Reticulum (ER)** is a series of double membranes that ___LOOP____ back and forth between the cell membrane and the __NUCLEUS_____. These membranes fill the _CYTOPLASM_____ but you cannot see them because they are very __TRANSPARENT_____. The rough E.R. has ___RIBOSOMES_____ attached to it. This gives it its texture. These ribosomes manufacture _____PROTEIN_____ for the cell. The ribosomes are the _____ORGANELLE_____ which manufacture proteins. Draw the rough ER with a ribosome.

oth ER

6. **Smooth E.R.** ___LACKS_____ ribosomes. It acts as a ____PATHWAY_____ throughout the cytoplasm. It runs from the cell membrane to the nuclear ___MEMBRANE_____ and throughout the rest of the cell. It also produces _LIPIDS_____ for the cell. Draw a picture of the smooth ER.