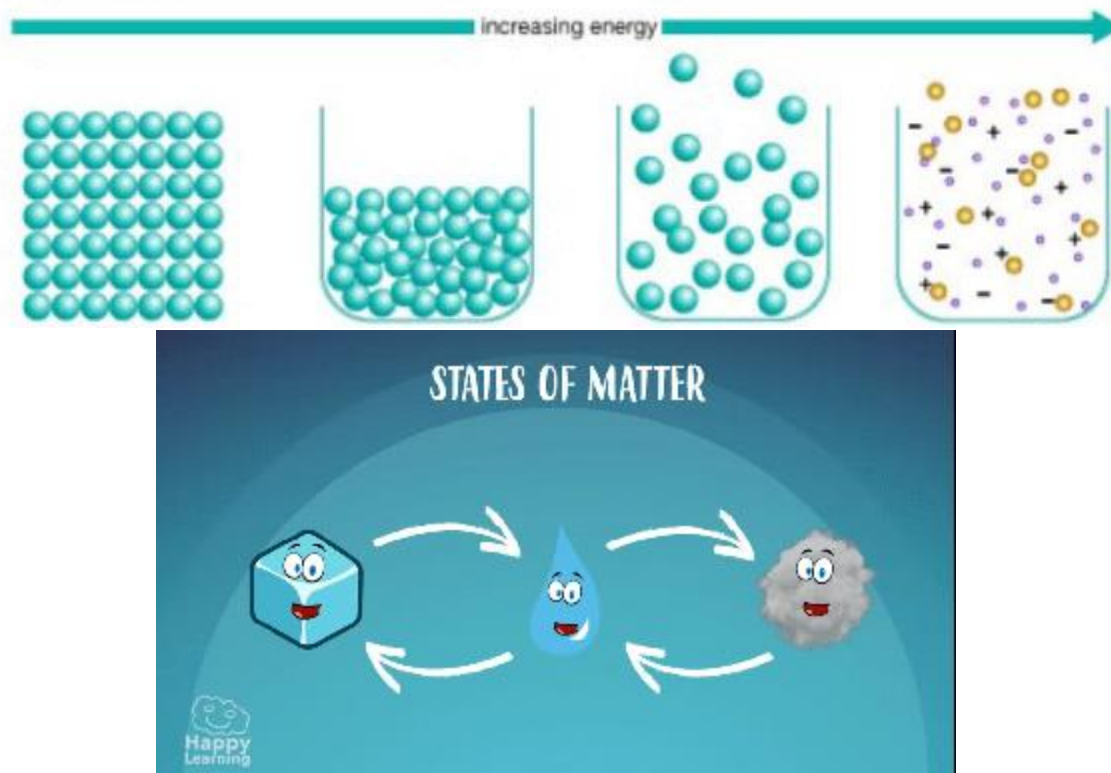


STATES OF MATTER CHAPTER 13



See <https://www.learningctronline.com/courses> for Materials and Resources.

Topics:

1. States of Matter

Objectives:

1. Describe the three assumptions of the kinetic theory as it applies to gases.
2. Define, measure, and calculate pressure in terms of atmospheric, gas & normal (standard) pressure.
3. Compare the physical properties of solids, liquids and gases in terms of shape, volume, motion (fluidity), density, expansivity and compressibility.
4. Distinguish the properties of liquids: average kinetic energy (temperature), dynamic equilibrium, vapor pressure versus temperature, boiling versus evaporation.
5. Distinguish the properties of solids and the phase changes involved.
6. Decipher phase diagrams, identifying pressure, temperature, phase changes and triple point.
7. Understand the relationship between intermolecular forces and kinetic energy for each state of matter and phase change.

TAKE NOTE

1. Notes / Study Guide
2. Lab Sublimation
3. Chapter 2-13 Test
4. Week 3 Devotional (<https://www.learningctronline.com/devotional>)

Text: Chapter 13: States of Matter p. 418-431; 436-447

Read the assigned pages in the text.

Class Notes: PowerPoint or PDF

Notes/Study Guide: Fill in the Chapter 13 worksheet to understand the class notes.

Homework: TEXT

- (1) Answer the KEYED "**Lesson Check**" questions at the end of each of the chapter.
- (2) Answer the "**Sample problems**" found in the "Sample Problem" boxes throughout the chapter. An answer KEY is provided for you to use to self-correct your homework problems.
 - Put your answers into complete thoughts in a Word document. Do NOT just put the answer, but write a phrase or sentence that you can study from for your tests. Save your work in a WORD document and SAVE into your HOMEWORK folder in the Chemistry folder on the desktop.
 - Assignments will be "spot checked" during class or submitted via email.

Alternate Homework:

1. Phases of Matter Graphs
2. 13 Practice Quiz Phases of Matter

Lab: Sublimation

Investigate the process of sublimation and perform the lab using the lab worksheet (based on the experiment on **page 437 of your textbook**). You must create a Word document in your Chemistry lab folder on your computer for this file.

- Complete the calculations and data by recording your observations of what happens in the lab.

- Conclusions should be answered in complete sentences that convey a complete thought.
- Include a picture of your set-up. Take a picture with your camera or phone and upload it as a jpeg or other image and then insert it into the lab worksheet. If necessary, you could find a suitable picture on the internet (be sure to give the source).
- Answers are provided at the end of the worksheet for guidance and reinforcement. You may use them **AS LONG AS YOU REWORD** your answers in **YOUR OWN WORDS** versus copying and pasting.
- If you do **NOT** have the necessary materials (air freshener), a video is provided (click link below) showing sublimation of dry ice (carbon dioxide).

[Sublimation of Dry Ice](#) (1:59)

- Save document into your LAB folder in the Chemistry folder on your desktop.

TEST: Matter & States of Matter

1) the academic integrity policy

- Tests must be completed **WITHOUT** referring to books, notes, the internet, people, or any outside resources.
- Students **MAY** use the approved Periodic Tables, approved Reference Tables, or approved equation (formula) sheet (provided by the teacher) along with calculators and scratch paper.
- A guardian should be proctoring the test. Proctoring means to monitor the following:

2) The test is composed of 20 multiple choice questions and some written problems.

- The **multiple-choice test must be taken "in one sitting"**, meaning that once you start the test, you must complete it without interruption. (40 minutes)
- Take a short break (5-10 minutes)
- The **written portion of the test must be taken "in one sitting"**, meaning that once you start the test, you must complete it without interruption. (30 minutes)

3) There is a **90-minute time limit** on this test. Please have the proctor write the time taken at the top of your answer sheet with their signature or initials.

4) Proctors should **NOT** be reading the test or engaging students during the test.

5) Do NOT use RED font. Black font is best.

Supplemental Resources (Optional)

1. Very Fun Pressure Activities (lab)
2. Chapter 13 Study Guide Pearson