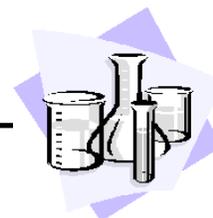


Name: \_\_\_\_\_ Period: \_\_\_\_\_

Final Due Date: Thursday, February 8, 2006

# THE NATURE OF MATTER



## OBJECTIVES:

Students will be able to:

- A. Investigate and classify common materials as *elements*, *compounds*, or *mixtures* (heterogeneous or homogeneous) based on their physical and chemical properties.
- B. Predict how factors such as particle size and temperature influence the rate of dissolving.
- C. Investigate and compare methods for separating mixtures by using physical properties of the components.
- D. Analyze and interpret a graph that relates temperature and heat energy absorbed during phase changes of water.
- E. Predict the particle motion as a substance changes phases.
- F. Classify changes in matter as *physical* or *chemical*.
- G. Identify evidence of chemical changes.
- H. Distinguish between endothermic and exothermic reactions.

## LECTURES:

- Monday, 1/29/07: Properties of Matter (2.2)
- Tuesday, 1/30/07: Changes of Matter (2.3)
- Wednesday, 1/31/07: no lecture-Chapter 2 review
- Thursday, 2/1/07: Matter and Energy (3.1)
- Friday, 2/2/07: Fluids (3.2)
- Monday, 2/5/07: Behavior of Gases (3.3)
- Tuesday, 2/6/07: no lecture-Lab #2
- Wednesday, 2/7/07: no lecture-unit review
- Thursday, 2/8/07: no lecture-unit test



## C-LAYER ACTIVITIES:

Students must earn at least 145 points to receive a "C" grade for this unit. You must complete 145 points of C-Layer activities to advance to B-Layer activities.

Points possible	Points earned	Assignment description	Date Due	Teacher initial
<b>Section 2: (60 points minimum)</b>				
*10		Read section 2.2 & outline notes. Turn in your notes <b>OR</b> Listen to lecture, participate & take notes on 1/29/07. Turn in your notes	1/29/07	
*10		Answer section 2.2 section review questions, practice problems and math skills	1/30/07	

		<b>OR</b> Concept Review Worksheet: "Properties of Matter"		
*10		Read section 2.3 & outline notes. Turn in your notes <b>OR</b> Listen to lecture, participate & take notes on 1/30/07. Turn in your notes	1/30/07	
*10		Answer section 2.3 section review questions, practice problems and math skills <b>OR</b> Concept Review Worksheet: "Changes in Matter"	1/31/07	
*5		Math Skills Worksheet: "Density"	1/31/07	
5		Create flashcards or a flipbook for the key terms for Chapter 2	1/31/07	
5		Create a concept map that illustrates how matter is classified (p. 63, # 43)	1/31/07	
5		Use a Venn Diagram to compare and contrast compounds and elements vs. mixtures	1/31/07	
5		Use a Venn Diagram to compare and contrast physical and chemical properties	1/31/07	
5		Use a Venn Diagram to compare and contrast endothermic and exothermic reactions	1/31/07	
8		Research: Compare physical and chemical changes/processes and give three examples of each.	1/31/07	
10		Chapter 2 Review (p. 60-62) #s: 1-28	1/31/07	
10		Chapter Test A Worksheet, Chapter 3	1/31/07	
<b>Section 3: (85 points minimum)</b>				
*10		Read section 3.1 & outline notes. Turn in your notes <b>OR</b> Listen to lecture, participate & take notes on 2/1/07. Turn in your notes	2/1/07	
*10		Answer section 3.1 section review questions, practice problems and math skills <b>OR</b> Concept Review Worksheet: "Matter and Energy"	2/2/07	
*10		Read section 3.2 & outline notes. Turn in your notes <b>OR</b> Listen to lecture, participate & take notes on 2/2/07. Turn in your notes	2/2/07	
*10		Answer section 3.2 section review questions, practice problems and math skills <b>OR</b> Concept Review Worksheet: "Fluids"	2/3/07	
*10		Read section 3.3 & outline notes. Turn in your notes <b>OR</b> Listen to lecture, participate & take notes on 2/3/07. Turn in your notes	2/3/07	
*10		Answer section 3.3 section review questions, practice problems and math skills <b>OR</b>	2/4/07	

		Concept Review Worksheet: "Behavior of Gases"		
*5		Math Skills Worksheet: "Pascal's Principle"	2/3/07	
*5		Math Skills Worksheet: "Boyle's Law"	2/4/07	
5		Create flashcards or a flipbook for the key terms for Chapter 3	2/7/07	
5		Complete the concept map that illustrates the forms of matter (p.97, # 43)	2/7/07	
5		Create a Venn Diagram that compares and contrasts: Evaporation, Sublimation, and Condensation	2/7/07	
5		Illustrate an example of Pascal's Principle	2/7/07	
5		Explain Gay-Lussac's Law using examples that could be possible from real life	2/7/07	
8		Research: Write how you are affected by fluid every day (include examples such as weather, transportation, plumbing, cooking, breathing, bathing, outdoor sports activities and be able to back up your comments by research)	2/7/07	
10		Chapter 3 Review (p.94-96) #s: 1-31	2/7/07	
10		Chapter Test A Worksheet, Chapter 3	2/7/07	

## **B-LAYER ACTIVITIES:**

Students choose 2 ONLY (20 points): You must complete 20 points in order to receive a "B", and to advance to the A-Layer activities.

Points possible	Points earned	Assignment description	Date Due	Teacher initial
10		Suppose you are planning a journey to the center of Earth in a self-propelled tunneling machine. List properties of the special materials that would be needed to build the machine, and explain why each property would be important.	2/8/07	
10		Use a computer drawing program to illustrate (or illustrate yourself) a chemical change in which one atom and one molecule interact to form two molecules	2/8/07	
10		Explain why the process of digestion involves mainly chemical changes. Research what the starting materials of digestion are and the final end products, and find out if physical changes are involved. Why is digestion necessary?	2/8/07	
10		Your body uses the food you eat to do work. However, some of the food energy is lost as heat. How does your body give off this heat? Use researched examples.	2/8/07	

## **A-LAYER ACTIVITIES:**

Students choose 1 ONLY (20 points): You must complete 20 points in order to receive an "A".

Students are responsible for conducting these labs. All consumable and household supplies should be gathered by the student. The experiment should be done in class after the daily lecture. If a student would like to conduct a lab at home, that is acceptable. Any lab

conducted at home must be written up on the appropriate form and signed by a parent/guardian observer. All labs MUST have pre-lab written *before* the student can begin the lab. The post-lab must also be completed and turned in for the points.

Points possible	Points earned	Assignment description	Date Due	Teacher initial
20		Quick Lab p. 49: "How are the mass and volume of a substance related?"	2/9/07	
20		Quick Lab p. 89: "Does temperature affect the volume of a balloon"	2/9/07	