

Name: _____ Class Period: _____

Final Due Date: Thursday December 21, 2006

Elements, Compounds, & Mixtures



Objectives

Students will be able to:

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| <ul style="list-style-type: none"> A. Describe pure substances. B. Describe the characteristics of elements, and give examples. C. Explain how elements can be identified. D. Classify elements according to their properties. E. Describe the properties of compounds. F. Identify the differences between an element and a compound. | <ul style="list-style-type: none"> G. Give examples of common compounds. H. Describe the properties of mixtures. I. Describe methods of separating the components of a mixture. J. Analyze a solution in terms of its solute, solvent, and concentration. K. Compare the properties of solutions, suspensions, and colloids. |
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Lectures:

Monday, 12/11: no lecture, unit preview

Tuesday, 12/12: Metals, Non-metals, & Metalloids

Wednesday, 12/13: Compounds

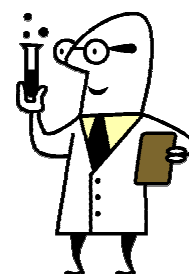
Thursday, 12/14: Mixtures

Monday, 12/18: Solutions

Tuesday, 12/19: Suspensions & Colloids

Wednesday, 12/20: no lecture, unit review

Thursday, 12/21: no lecture, final day for all activities



C-Layer Activities

Students must earn at least 90 points to receive a "C" grade for this unit. At least 25 points must come from Section 1 activities, at least 30 points must come from Section 2 activities, and at least 35 points must come from Section 3 activities. As papers are graded and handed back, students have to keep track of their points earned and which objectives (listed above) they have met in the following table.

| points possible | points earned | Assignment description | objectives met |
|---|---------------|---|----------------|
| Section 1: (25 points minimum requirement) | | | |
| 5 | | Listen to lecture, participate, & take notes on December 12. Turn in your notes. | |
| 5 | | Create a study guide, flipbook, or flashcards for the terms to learn listed p. 82 | |
| 5 | | Create a concept map that illustrates elements divided into their three categories (see "Rubric for Diagrams/Illustrations") | |
| 10 | | Draw the 3 categories of elements (metals, non-metals, and metalloids), label their characteristics and give 3 examples of each (see "Rubric for Diagrams/Illustrations") | |
| 10 | | <i>Worksheet:</i> Chapter 4 Vocabulary and Notes: Sections 1 & 2 | |
| 10 | | <i>Worksheet:</i> An ELEMENTary Word Puzzle | |

| Section 2: (30 points minimum requirement) | | | |
|--|--|--|--|
| 5 | | Listen to lecture, participate, & take notes on December 13. Turn in your notes. | |
| 5 | | Listen to lecture, participate, & take notes on December 14. Turn in your notes. | |
| 5 | | Create a postcard showing five familiar compounds and their chemical makeup (see "Rubric for Diagrams/Illustrations") | |
| 5 | | Create a comic strip showing a compound being broken down into simpler substances (see "Rubric for Diagrams/Illustrations") | |
| 10 | | Research: compare physical and chemical changes/processes and give three examples of each - hand it in with the "Self Evaluation of Writing" worksheet | |
| 10 | | Worksheet: Chapter 4 Vocabulary and Notes: Section 3 | |
| 10 | | Worksheet: Puzzlers, Twisters & Teasers: Elements Mixtures & Compounds | |
| Section 3: (45 points minimum requirement) | | | |
| 5 | | Listen to lecture, participate, & take notes on December 18. Turn in your notes. | |
| 5 | | Listen to lecture, participate, & take notes on December 19. Turn in your notes. | |
| 5 | | Create a study guide, flipbook, or flashcards for the terms to learn listed p. 90 | |
| 5 | | Create a Venn Diagram: suspensions and colloids (see "Rubric for a Venn Diagram") | |
| 10 | | Write/type a letter to your teacher explaining the objectives you have learned in this unit and hand it in with the "Self Evaluation of Writing" worksheet | |
| 10 | | Worksheet: Reinforcement: All Mixed Up | |
| 10 | | Worksheet: Problem Solving: Jet Smart | |
| 10 | | Worksheet: Chapter Review Worksheet | |

B-Layer Activities

Students choose 2 ONLY (20 points)

*Students are responsible for conducting these labs. All consumable materials 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 the lab at home, that is acceptable. Any lab conducted at home must be written up on the appropriate worksheet and signed by a parent observer.

- 1) *Lab: Elements, Compounds, & Mixtures Assessment (10 points)
- 2) *Lab: Investigate Mixtures (10 points)
- 3) *Lab: Investigate Separating Mixtures (10 points)
- 4) *Lab: Investigate Chemical Changes (10 points)
- 5) *Lab: Making Butter (10 points)

A-Layer Activities

Students choose 1 ONLY (20 points)

Students are responsible for conducting these labs. All consumable materials and household supplies should be gathered by the student. The teacher will supply the lab equipment. It is good practice to read ahead and be prepared making sure any equipment you need is available on the planned day of your experiment. **The experiment must be done in class (after the daily lecture).

- 1) **Lab: Flame Tests (preferably conducted in a group of 3-4 students - while supplies last) (20 points)
- 2) **Lab: Sugar Cube Race (20 points)