

# ELEMENTS, COMPOUNDS AND MIXTURES

Chapter 4

25. Define: Concentration: \_\_\_\_\_

\_\_\_\_\_

26. Define: Solubility: \_\_\_\_\_

\_\_\_\_\_

27. Look at figure 15. What are 3 ways to make something dissolve faster?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

28. Fill in the chart below. Use pages 96-97

	Definition	Describe the size of the particles	Give 2 Examples
<b>Suspension</b>	_____ _____ _____ _____ _____ _____ _____ _____ _____		
<b>Colloid</b>	_____ _____ _____ _____ _____ _____ _____ _____ _____		

Draw and label an example of an element, compound & a mixture

Additional notes for this chapter: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Science  
Number

Name: \_\_\_\_\_ Pd. \_\_\_\_\_

Parent Signature: \_\_\_\_\_

Section 1: Elements (pg 82)

Word: Pg found	Book definition	Give some examples
element	_____ _____ _____ _____ _____ _____ _____	_____ _____ _____ _____ _____ _____ _____
Pure substance	_____ _____ _____ _____ _____ _____ _____	_____ _____ _____ _____ _____ _____ _____
metals	_____ _____ _____ _____ _____ _____ _____	_____ _____ _____ _____ _____ _____ _____
nonmetals	_____ _____ _____ _____ _____ _____ _____	_____ _____ _____ _____ _____ _____ _____
metalloids	_____ _____ _____ _____ _____ _____ _____	_____ _____ _____ _____ _____ _____ _____

Section 3: Mixtures (p 90-97)

18. Why is pizza a perfect example of a mixture?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

19. According to the caption for figure 11, you can identify each component in a mixture because \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

20. Look at the pictures on page 91. There are many different ways to separate mixtures. What are some examples?

\_\_\_\_\_  
\_\_\_\_\_

21. **Mixtures:**

Components are elements, compounds, or both.	Components _____ their original properties	Separated by _____ means _____	Formed using _____ ratio of components.
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**Compounds:**

Components are _____	Components _____ their original properties	Separated by _____ means _____	Formed using _____ ratio of components.
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22. Decide whether each definition is a **solution**, a **solute**, or a **solvent**. Write the answer on the line

\_\_\_\_\_ : the substance that is dissolved

\_\_\_\_\_ : the substance in which the solute is dissolved

\_\_\_\_\_ : a mixture that appears to be a single substance, but is composed of particles of two or more substances that are evenly distributed

23. Look at the picture on page 94. What's the difference between the two beakers? \_\_\_\_\_

\_\_\_\_\_

24. **True or False (circle one):** Solubility of a solute is the amount of solute needed to make a saturated solution using a given amount of solvent at a certain temperature.

**Teach a parent: Today's concept is:**

**Explain what an Element IS AND the 3 different types of Elements**

Please use this format for the Teach It Master It (TIMI) assignments.. This should be fun!! If dancing around the table helps to teach a concept, do it! The better **YOU the student** can teach the concept, the better YOU the student will understand the concept. AND you might just have some fun too! To teach the assignment/concept, you may use ANY or ALL of these techniques to help. You may also use the book as a guide. PLEASE HAVE FUN!!

- A. Simply explain the concept. No written work is necessary.
- B. Explain the concept and use some notebook paper to show real-life examples you created while teaching.
- C. Write out the thought process you will use to explain the concept. You may do this in steps or a one-chunk paragraph form.
- D. Show real-life examples you used along the way to effectively explain the process.

**Parent Response**

- 1. \_\_\_\_\_ I'm not sure my child really understands, therefore, I don't either. Please work with him/her and let's try again.
- 2. \_\_\_\_\_ The concept was explained thoroughly with effective examples he/she created. "By golly, I think they've got it!"
- 3. \_\_\_\_\_ WOW! My child did an exceptional job! It was logically explained, therefore I caught on immediately and feel confident about teaching it to others. The self-created examples were a perfect fit. My child even asked me a question at the end to make sure I understood. I believe my child could effectively teach this concept to others.

Parent Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Mom or Dad Comments: Please explain how your student taught you this concept and what you learned in 3-5 sentences!

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Space for any additional notes from this section:

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**Section 2: Compounds (pages 86-89)**

- 9. What is a compound? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- 10. **True or False (circle one):** Most substance you encounter everyday are compounds.
- 11. **True or False (circle one):** The ratio of the mass of hydrogen to the mass of oxygen in water is always the same – 1g of hydrogen to 8g of oxygen, therefore, we write this ratio as 1:8 or 1/8.
- 12. Copy figure 7 (pg87) below. You may summarize the descriptions

- 13. What is the **subheading** on p 86? \_\_\_\_\_  
\_\_\_\_\_
- 14. What is the **subheading** on p 87? \_\_\_\_\_  
\_\_\_\_\_
- 15. What are the **subheadings** on p 88? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- 16. What kind of compounds are found in nature? \_\_\_\_\_  
\_\_\_\_\_
- 17. What kind of compounds are found in industry? \_\_\_\_\_  
\_\_\_\_\_

**Teach a parent: Today's concept is:**

**Explain what a compound is AND how they can be broken down**

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**Section 1: Elements (pages 80 –85)**

- 1. Read the story on page 80. What is one theory that explains how ice could have destroyed a thick steel plate?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- 2. Complete the caption for figure 1: "No matter what kind of physical or chemical change you attempt, an element !"  
\_\_\_\_\_  
\_\_\_\_\_
- 3. **True or False (circle one):** A pure substance is a substance in which there is only one type of particle.
- 4. What is the **heading** at the top of p 83?  
\_\_\_\_\_
- 5. **True or False (circle one):** Most elements are not combined in nature.
- 6. What is the **subheading** on p 84? \_\_\_\_\_  
\_\_\_\_\_

8. Look at p 85.  
What are examples of each of the following?

7. Copy figure 5 below. (pg84)	Metals
	Nonmetals
	Metalloids