

Name:

Date:

## Layered Curriculum: Atoms, Elements, Compounds

**Due Date: Thursday, October 20, 2016**

Look at each of the tables below. For each of the tables, you must complete a minimum number of points. In total, you must complete 125 points. All of your work should be paper clipped or stapled to this paper when you turn it in. Please put a check in the "Completed" column when you complete an assignment.

**C Level Assignments: You must complete at least 60 points in this section.**

<i>Assignment</i>	<i>Possible Points</i>	<i>Completed</i>
1. Define atom, element, compound and mixture.	5	
2. Illustrate how a homogeneous mixture looks compared to a heterogeneous mixture and briefly explain how they're different.	10	
3. Complete questions #s 1 - 4 on pg. 13 & 1-5 on pg. 17 in COACH book	5	
4. Illustrate and label the parts of an atomic model, being sure to label the charges of each part, as well.	5	
5. Complete #s 1-12 of Chapter 1 Review beginning on pg. 37 of COACH book.	10	
6. Define the Law of Conservation of Mass.	5	
7. Create a chart that organizes physical properties, physical changes, chemical properties and chemical changes. Provide a definition AND a picture.	10	
8. List 2 examples of a physical change and 2 examples of a chemical change.	5	
9. List 2 examples of a physical property & 2 examples of a chemical property.	5	
10. Answer questions 1-5 on page 32 in the COACH book.	5	
11. Define density and tell how it relates to an object sinking or floating in water (the density of water= 1g/cm <sup>3</sup> ).	10	
12. Write a sentence chain between element, compound, and mixture.	5	
13. Write a letter to a 5th grader explaining the difference between a pandemic and an epidemic.	5	
14. Label the following equation: circle the coefficients in one color and the subscripts in another color: $4\text{Fe} + 3\text{O}_2 \rightarrow 2\text{Fe}_2\text{O}_3$	5	
15. Compare and contrast group and period using a T-chart and draw an example of each.	5	

**B Level Assignments: You must complete at least 30 points from this section.**

Assignment	Points Earned	Completed
1. Using a periodic table, explain at least 4 trends/patterns that occur as you change locations on the periodic table.	5	
2. Balance the two following chemical equations: 1) $\text{___H}_2 + \text{___O}_2 \rightarrow \text{H}_2\text{O}$ 2) $\text{___S}_8 + \text{___O}_2 \rightarrow \text{SO}_3$	10	
3. Make a foldable that identifies metals, non-metals, and metalloids. Be specific and provide examples and pictures of each.	10	
4. Explain to a friend how to balance a chemical equation. Make sure to use key words such as subscript and coefficient in your explanation.	10	
5. Create a Venn diagram that compares and contrasts compound & mixture.	10	
6. Create a graphic organizer such as a spider map or table that identifies and explains the way a rock can be physically changed AND chemically changed. Explain the difference between the two.	10	
7. Explain why the following statements are true: 1) All matter is made up of atoms. 2) An electron with a proton equals a neutral charge 3) All atoms are in constant motion	10	
8. Create an illustration that compares/contrasts the molecular arrangement (the spacing of the atoms) of a solid, a liquid and a gas. Provide a description and example under each illustration.	10	

**A Level Assignments: You must complete at least 10 points from this section.**

Assignment	Points Earned	Completed
1. Create 5 multiple choice test questions. You must explain the answer to each question and explain why every other answer choice is wrong.	15	
2. Make an original diagram, mindmap, flow chart, or graphic organizer showing how all the concepts we have studied about matter (atoms & elements, the periodic table, molecules and compounds, mixtures, chemical and physical changes & properties, chemical reactions and the law of conservation of mass) are connected. Must have color and must be creative.	10	