Name: _____ Class Period: _____

Unit Competency: *MS8* *Students will understand and analyze atoms, matter, reactions, and interactions through scientific processes and practices.*

Performance Indicator:

A. *Develop a model using the Periodic Table of Elements to analyze patterns and interpret the characteristic properties of atoms of elements and molecules (include structure and composition) and predict relative properties of elements.*

Performance Indicator GSE:

S8P1. Obtain, evaluate, and communicate information about the structure and properties of matter.

e. Develop models (e.g., atomic-level models, including drawings, and computer representations) by analyzing patterns within the periodic table that illustrate the structure, composition, and characteristics of atoms (protons, neutrons, and electrons) and simple molecules.

Learning Targets: KNOWLEDGE

1. I can define an atom
2. I can locate and describe the three parts of an atom.
3. I can define electron, valence electron, nucleus, proton, neutron in terms of mass, charge, location in the atom, and the effect they have on the identity of an atom.
4. I can define and describe different types of models.
5. I can describe and draw the Bohr model of an atom.
6. I can identify general areas on the periodic table including solid, liquid, and gas; metal and nonmetal.
7. I can identify the name of the family (group) a certain atom belongs to on the periodic table.
8. I can identify and describe a molecule.

Learning Targets: REASONING

1. I can determine the type of atom based on the number of protons, neutrons, and electrons.
2. I can determine the number of protons, electrons, neutrons, valence electrons, mass number, and atomic number for any element using the periodic table.
3. I can compare and contrast the different types of models.
4. I can compare and contrast the properties of metals, nonmetals, and metalloids.
5. I can analyze how properties of elements change across a period in the periodic table.
6. I can deduce how the number of valence electrons in a given group on the periodic table relate to the properties of the elements in those groups.

Learning Targets: PRODUCTS

1. I can develop a model to analyze patterns and interpret the characteristic properties of atoms of elements and molecules (include structure and composition) and predict relative properties of elements.

DOK 1	Create definitions with illustrations for the key terms using flashcards, a foldable, or TIP chart. (Share with your teacher when done.) **AND** Notes from PowerPoint(s) found on 8th Grade Physical Science website.	Create a Quizlet. **OR** Create a Kahoot.	Website task(s) from 8th Grade Physical Science website	Create your own assignment. ******MUST be approved by your teacher!***	Checkup Score _____%
DOK 2	Compare, contrast, **and** summarize the differences between atoms, elements, and a molecules <u>using one</u> of the following: ● Newspaper article ● Foldable with summary page	**Periodic Table Mystery**	Identify **patterns** of elements in the periodic table. ● Periodic Table Patterns PowerPoint- Answer questions on the slides.	Patterns across the Periodic Table worksheet (includes graphing).	Checkup Score _____%
DOK 3	**History of the Atom** Research the contributions of the various scientists who have influenced how we view the structure of the atom. Choose the one who had the greatest impact on history and create a "You Be the Person" presentation in Google Classroom on Slides.	**Periodic Table Challenge**			Checkup Score _____%
DOK 4 All of these must be completed in order to get the lab activity!	Watch the following videos found on the 8th Grade Physical Science website: ● Ionic Bonding ● Ionic and Covalent Bonding	Read the Ionic and Covalent Bonding PowerPoint **and** complete the Ionic and Covalent Bonding Notes page.	Lab activity: <u>*Candy Compound Lab*</u> (an alternate lab will be given if students are not able to handle using candy with the lab). You will be working as a group with the teacher to complete this bonding lab activity.		Checkup Score _____%

KEY TERMS: atom, electron, nucleus, proton, neutron, valence electron, mass, charge, element, Periodic Table, Bohr model

Pretest _____% Post-test_____% **Start** 8/22/17 **End** 9/1/17

CHECKLIST FOR LEARNING TARGETS

Can you provide evidence for the following learning targets (See learning targets on page 1)? If yes, check it off and tell where the evidence is found. Once you have checked off each type of learning target (knowledge, reasoning, product), show your teacher.

Learning Targets	I have mastered this learning target.	Where is my evidence found?
K1		
K2		
K3		
K4		
K5		
K6		
K7		
R1		
R2		
R3		
R4		
R5		
R6		
P1		