**ARC Week at Glance – Meena (S 1 W 6)**

**Topic: Atomic structure &periodicity Course: AP Chemistry Grade: 9-12 Dates: September 9-13**

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|  | **Learning Target**  **(I am learning …)** | **Criteria for Success**  **(I can…)** | **Activation/ Instruction** | **Collaboration/**  **Guided Practice** | **Independent Learning/ Assessment** |
| *(Include at least one/two formatives\*in any part of the lesson as needed)* | | |
| **Monday** | *I am learning about the atomic structure & periodic table* | *I can explain what makes elements and isotopes different from each other.*  *--I can calculate the number of neutrons in an atom.* | *Do now: Discuss what characteristics can we use to classify different dogs? Point out each dog is a different variety, called a breed, but they are all dogs.*  *---- this analogy will walk them throughout the unit to understand the concept of isotopes.* | *Slides and student guided notes.*  *--college board video.*  *Explain atomic number, atomic mass and isotopes.*  *Build an atom –phet simulation—students will explore to build atom with partners.* | *Worksheet on atomic structure* |
| **Tuesday** | *I am learning about the atomic structure & periodic table* | *--I can calculate the atomic mass of an element.*  *--I can explain why chemists, use the periodic table.* | *Do Now:*  *MCQ—with justification.*  *explain why most of the isotopes are not whole-number values like the mass numbers that we normally see which are mostly only whole numbers.* | *slides and student guided notes.*  *--college board video.*  *Student assignment—introduction to atomic structure and beanium lab.*  *Calculating average atomic mass of isotopes.* | *Assignment on average atomic mass.* |
| **Wednesday** | *I am learning about the atomic structure & periodic table* | *I can…*  *- Explain that elements in the same column/group have similar chemical properties.*  *- Identify locations of metals, nonmetals and metalloids on the periodic table and describe*  *the common properties of each type of element.* | *Do Now:*  *Practice quiz questions – give proper reasoning.*  *Have students examine the periodic table and determine the pattern how the elements are arranged?*  *Discuss the answers of the students.* | --*college board video.*  *Discuss the layout of periodic table.*  *Periodic table coloring activity* | *Homework –getting to know PT* |
| **Thursday** | *I am learning about the atomic structure & periodic table* | *- Explain how the organization of the periodic table is based on the recurring properties of*  *the elements and explained by the pattern of electron configurations and the presence of*  *completely or partially filled shells (and subshells) of electrons in atoms.* | *Do Now: Calculate the average atomic mass of sulfur if 95.00% of all sulfur atoms have a mass of 31.972 amu, 0.76% has a mass of 32.971amu and 4.22% have a mass of 33.967amu.*  *Discuss the answer.*  *Introduce the energy of different shells and explain the EC—long and short form* | *College board daily video*  *Gizmo activity on electron configuration.* | *Homework—electron configuration* |
| **Friday** | *I am learning about the atomic structure & periodic table* | *I can..*  *--Compare and calculate*  *the wavelength,*  *frequency, and energy of*  *particular*  *electromagnetic*  *radiation.* | *Do Now:*  *Using the following electron configuration:*  *[Ar]4s2 3d10 4p5*  *And complete:*  *1) Group ---------*  *2) Period ---------*  *3) Valence electrons -------*  *4) Atomic Number --------*  *5) Element symbol ---------*  *6) Family name ------------*  *7) Other element with similar properties* | *college board video*  *introduce the relationship between wavelength, frequency and energy of the radiation.*  *Group /pair work to complete an assignment on the concept learnt.* | *Homework—complete the missed problems in class.* |

**Additional Info: Literacy Task Minor Grade Major Grade Course materials and resources are available in Canvas.**