**ARC Week at Glance – Meena (S1, W 7)**

**Topic: Periodic table & periodicity Course: AP Chemistry Grade: 9-12 Dates: September 16-20**

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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 to gather and synthesize information about the Periodic Table*  *--I am learning to show how knowledge of chemistry is used in everyday life.* | *I can*  *--relate the reactivity and stability of different families of elements to their atomic structure including alkali metals, alkaline earths, chalcogens, halogens, and noble gases.*  *--Identify properties of common families of elements* | *Do now:*  *Have students examine the periodic table and determine the pattern how the elements are arranged?*  *Discuss the answers of the students* | *Give a brief introduction to the PERIODIC TABLE.*  *--Introduce the terms FAMILY, GROUP, PERIOD and SERIES.*  *--Distribute PERIODIC TABLES and different colors to understand the lay out and concept behind the periodic table.*  *--periodic table coloring activity.* | *College board videos and practice problems.* |
| **Tuesday** | *--I am learning to gather and synthesize information about the Periodic Table*  *--I am learning to show how knowledge of chemistry is used in everyday life.* | *I can*  --*explain how elements differ in terms of structural parts and electrical charges of atoms*  *--gather and synthesize information about the Periodic Table*  *-- show how knowledge of chemistry is used in everyday life.* | *Do Now:*  *The students will watch a video about the properties of elements and in groups of four, students are to list ways in which elements are used in our lives. Follow with class discussion, making a list on the board with the students’ ideas.* | *--Introduce element symbols.*  *- Discuss how both the symbols and the names are derived.*  *-Identify the different groups (families) of elements on the periodic table.*  *-Discuss how we predict the properties and characteristics of the elements from their position on the periodic table*  *-Define the following terms: chemical formula, period, group, representative elements*  *--Explain why elements have similar chemical properties****.***  --*periodic table assignment*. | *College board videos and practice problem* |
| **Wednesday** | *--I am learning to gather and synthesize information about the Periodic Table*  *--I am learning to show how knowledge of chemistry is used in everyday life.* | *I can*  *--explain how elements differ in terms of structural parts and electrical charges of atoms*  *--gather and synthesize information about the Periodic Table*  *--show how knowledge of chemistry is used in everyday life.* | *Do Now: Sample periodicity questions.*  *Matching the element to the atom information.* | --*quantum mechanical model presentation and student notes.*  *---atomic spectra assignment*. | *College board videos and practice problem* |
| **Thursday** | *--I am learning to determine the electron configuration of various elements.* | *I can*  *--determine the relationship between the atomic number and the number of electrons in a neutral atom.  --understand what is meant by shell, subshell, and orbital.  -- determine the electron configuration of various elements* | *Do Now:*  *why do scientists use mathematical models to describe the position of electrons in atoms?*  *--- understand that the current model of the atom is a mathematical model.* | *Introduce Bohr’s model of atom and understand the concept of energy levels---compare them to rungs of a ladder.*  *Explain the limitations of Rutherford’s atomic model.*  *Discuss that the word orbital was coined by scientists to describe the space in which an electron has a high probability of being found.*  *Witness an example of quantized energy to a trumpet.*  *--electron configuration assignment.* | *College board videos and practice problem.* |
| **Friday** | *--I am learning to determine the electron configuration of various elements.* | *I can*  *--determine the relationship between the atomic number and the number of electrons in a neutral atom.*  -- *understand what is meant by shell, subshell, and orbital.  --determine the electron configuration of various elements* | *Do Now: MCQ – explain with justification.* | *Watch a video on quantum mechanical model.*    *Introduce the concept of electron cloud by comparing to a photograph of spinning windmill blades.*    *Discuss principal energy levels n=1,2,3,4 and so on.*    *Understand the sub energy levels as s,p,d,f sub levels*    *Observe the shapes of s and p orbitals and their orientation in a three-dimensional coordinate system using foam balls and wooden skewers.* | *College board videos and practice problem.* |

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