**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.**