**ARC Week at Glance – Meena (S1, W 8)**

**Topic: Electron configuration & PES Course: AP Chemistry Grade: 9-12 Dates: September 23-27**

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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 electron configuration and photoelectron spectroscopy*. | *I can*  *—Explain the concept of electron configuration and how to write electron configuration for elements using the Aufbau principle, Pauli exclusion principle and Hund’s rule.* | *Do Now*:  *work with your partner to develop the electron configuration for period 1,2 and 3 and compare your answer and write the difference.* | *Slides and student notes.*  *--video on writing electron configuration.*  *--gizmo on electron configuration.* | *College board daily videos*  *& topic quiz* |
| **Tuesday** | *I am learning about the electron configuration and photoelectron spectroscopy* | *I can*  *—Explain the concept of electron configuration and how to write electron configuration for elements using the Aufbau principle, Pauli exclusion principle and Hund’s rule* | *Bell work: write the electron configuration of elements and ions.*  *Go over the answers and assist students to identify their common mistakes* | -- *List the rules for writing the electron configuration.*  *--assignment on electron configuration of elements in ground state, excited state and ions.* | *College board daily videos*  *& topic quiz* |
| **Wednesday** | *I am learning about the electron configuration and photoelectron spectroscopy* | *I can*  *--Interpret a photoelectron to identify the relative energies of electrons.*  *--Relate the features of a PES and explain how trends in ionization energy are reflected in the spectrum.* | *Bell work: write the ground state electron configuration, noble gas notation, orbital diagram of nitrogen. Magnesium and chlorine*. | * *Provide a PES graph for a simple element (like sodium or neon) and guide students through interpreting the peaks:*   + *Identify the energy levels associated with each peak.*   + *Explain how the relative peak heights reflect the number of electrons in each sublevel.*   + *Connect the observed PES features to the electron configuration of the element.* | *College board daily videos*  *& topic quiz* |
| **Thursday** | *I am learning about the electron configuration and photoelectron spectroscopy* | *I can*  *--Interpret a photoelectron to identify the relative energies of electrons.*  *--Relate the features of a PES and explain how trends in ionization energy are reflected in the spectrum.* | *Review the concepts of electron configuration and pes.* | * + *Assessment – electron configuration and photoelectron spectroscopy.* | *College board daily videos*  *& topic quiz* |
| **Friday** | *I am learning to explain what causes atomic emission spectra.* | *I can explain what causes atomic emission spectra.*  *I can explain how the frequencies of emitted light are related to changes in electron energies* | *Bell work: writing the electron configuration of elements and ions.*  *Go over the answers and assist students to identify their common mistakes* | *Have students draw and label wave diagrams and illustrate the relationship between wavelength and frequency.*  *Assignment to calculate energy, wavelength and frequency. Discuss the answer.* | *College board daily videos*  *& topic quiz* |

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