**ARC Week at Glance – Meena (S 1, W16)**

**Topic: Electromagnetic spectrum, photoelectric effect Course: AP Chem Grade:9-12 Dates: November 18-22**

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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 explain what causes atomic emission spectra.* | *I can…*  *-- Explain what causes atomic emission spectra.*  *-- 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* | *Discuss how the neon signs produce different colored lights.*  *Introduce electromagnetic radiation. Relation between frequency wavelength and speed of light power point.*  *You tube video on atomic spectra*  *3.11-I do, we do and you do assignment.* | *College board videos on 3.11* |
| **Tuesday** | *I am learning to explain what causes atomic emission spectra.* | *I can…*  *-- Explain what causes atomic emission spectra.*  *-- Explain how the frequencies of emitted light are related to changes in electron energies* | *Bell work: Calculate the energy of a quantum of radiant energy with a frequency of 5x 10^11/s*  *Discuss how to apply the formula relating energy, frequency.* | *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.* | *3.11and 3.12-- assignment*. |
| **Wednesday** | *I am learning to explain what causes atomic emission spectra.* | *I can..*  *Explain the properties of an absorbed or emitted photon in relationship to an electronic transition in an atom or molecule* | *Bell work: What is the frequency of UV light that has an energy of 2.39 × 10-18 J? What is the wavelength and frequency of photons with an energy of 1.4 × 10-21 J?* | *Flame test lab on rotation basis.* | *College board videos on 3.12* |
| **Thursday** | *I am learning to explain what causes atomic emission spectra.* | *I can..*  *Explain the amount of light absorbed by a solution of molecules or ions in relationship to the concentration, path length, and molar absorptivity* | *Bell work: A photon has a frequency (v) of ​2.68 x106 Hz.  Calculate its energy* | *Phet simulation on Beer’s law.* | *College board videos on 3.13* |
| **Friday** | *I am learning to explain what causes atomic emission spectra.* | *I can..*  *Explain the amount of light absorbed by a solution of molecules or ions in relationship to the concentration, path length, and molar absorptivity* | *Bell work: MCQ’s from college board*. | *3.13 I do, we do and you do packet.* | *Science fair project*. |

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