Grade 10/11/12
Distance Learning Module 2: Week of: April 6 - April 10
Wave Particle Duality / Electromagnetic Spectrum

Content Area: Honors Chemistry - *Modified from Unit 6 - Atomic Structure, Electron Configuration & Periodic Relationships*

Targeted Goals from Stage 1:

Content Knowledge: Energy can be described on a microscopic level which describes the motion/behavior of the particles. The structure and interactions of matter are determined by electrical forces within and between atoms. Electrons can display energy changes as movements between energy levels. Wavelength, frequency, and amplitude are properties of a wave that determine its characteristics such as color and energy and are used in everyday scientific application.

Vocabulary: wave, wavelength, frequency, photon, quantum, atomic emission spectrum, electron configuration, principal energy level, sublevel, orbital, periods, groups, valence electrons, ionization energy, atomic radius, and electronegativity

Skills: Describe and calculate wavelength, frequency, and energy of a photon.

- Describe the energy change that happens during an absorption spectrum.
- Perform calculations of wavelength, frequency, or energy, given any one of the three variables.

Expectation:

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone at end of the week)
Monday: *Students can set their own pacing, but make sure to meet the weekly expectations shown below:* ● Watch Edpuzzle Video on EM Waves ● Watch Edpuzzle Video on Intro to Duality of Light ● Watch Edpuzzle Video on Wave-Particle Duality and the Photoelectric Effect	DL Objectives_Module 2_Unit 6 Objectives_Wave Particle Duality (Sections 7.1-7.4) Edpuzzle Video EM Waves Edpuzzle Video - Intro to Duality of Light Edpuzzle Video - Wave-Particle Duality and the Photoelectric Effect	Submit ONE or MORE of the following to Google Classroom each day: ❏ pictures of your notes from Edpuzzle Videos or Unit 6 Wave Particle Duality PowerPoint ❏ answer embedded multiple choice while watching Edpuzzle videos ❏ picture of or electronically submitted completed Summarizing Notes

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone at end of the week)
● Complete Summarizing Notes document to organize new info	Summarizing_Notes.docx	document (You may need to consult PowerPoint to complete)l
Tuesday: ● Read through Unit 6 PowerPoint Slide Show & take notes ● Complete Wkst 7-1 sample problems ● Electron Energy & Light POGIL is an Optional Extension Activity - Completion is optional.	DL_Module 2_Unit 6_Wave Particle Duality (Sections 7.1-7.4) WKST 7-1 Wavelength Frequency and Energy KEY 7-1 and 7-3.pdf 12 Electron Energy and Light POGIL (Optional Extension Activity)	Submit ONE or MORE of the following to Google Classroom: ❏ pictures of your notes from Edpuzzle Videos or Unit 6 Wave Particle Duality PowerPoint ❏ picture of or electronically submitted completed Wkst 7-1 on Wavelength, Frequency, & Energy Calculations ❏ picture of completed Electron Energy & Light POGIL - **OPTIONAL**
Wednesday: ● Watch Edpuzzle Video on The Bohr Atom ● Watch Edpuzzle Video on Calculations involving the Rydberg equation & Hydrogen ● Read through Unit 6 PowerPoint Slide Show & take notes	Edpuzzle - The Bohr Atom Edpuzzle - Calculations involving the Rydberg equation & Hydrogen WKST 7-5 Electron_Excitation Problems KEY_WKST 7-5 Excited Electrons.pdf	Submit ONE or MORE of the following to Google Classroom: ❏ pictures of your notes from Edpuzzle Videos or Unit 6 Wave Particle Duality PowerPoint ❏ picture of or electronically submitted completed Wkst 7-5 on Excited Electrons Calculations
Thursday: ● Watch Edpuzzle Video on Atomic Emission Spectrum ● Complete Virtual Flame Test Lab Simulation ● Read through Unit 6 PowerPoint Slide Show & take notes	Edpuzzle - Atomic Emission Spectra DL_Module 2_Mystical Fire Phenomenon & Flame Test Virtual Lab	Submit ONE or MORE of the following to Google Classroom: ❏ Completed Virtual Flame Lab document ❏ pictures of your notes from Edpuzzle Video or Unit 6 Wave Particle Duality Powerpoint

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone at end of the week)
School is closed for Good Friday. We have provided some optional activities for interested students. There is no obligation to complete any of these activities and students will not be behind their classmates if they do not complete them. Friday: ● Complete Virtual Flame Lab Content Check	Resource posted in Google Classroom	Submit ONE or MORE of the following to Google Classroom: ❑ picture of or electronically submitted Virtual Flame Lab Content Check

Week criteria for success (attach student checklists or rubrics): By the end of this week, students should have:

- ❑ watched Edpuzzle videos and responded to embedded video questions where appropriate
- ❑ taken notes on Edpuzzle videos **or** Unit 6 Chapter 7_Wave Particle Duality PowerPoint Slide Show (Sections 7.1-7.4)
- ❑ completed Summarizing Notes
- ❑ completed Wavelength, Frequency & Energy Practice (Wksht 7-1)
- ❑ **OPTIONAL** -- completed Electron Energy & Light POGIL
- ❑ completed Electron Excitation Problems (Wksht 7-5)
- ❑ completed Mystical Fire_Flame Test Virtual Lab & responded to questions
- ❑ completed Virtual Flame Lab Content Check

Supportive resources and tutorials for the week (plans for re-teaching):

- online virtual Q and A help sessions (see Google Classroom for times and invite codes)
- read and re-read the textbook
- watch and rewatch Edpuzzle videos
- practice worksheets and corresponding answer keys in Google Classroom