A blue and grey logo with claws

Description automatically generated**2024-2025 Weekly Lesson Planning Document**

Template for the following:

Science, Social Studies, CTE, World Languages,

HPELW, Fine Arts, JROTC

Week of Monday, February 24, through Friday, February 28

**EDUCATOR’S NAME:** \_\_\_ Ms. Burton, Ms. Daughrity, Ms. Mitchell \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ **SUBJECT:** \_\_\_\_\_\_Chemistry I\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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|  | **MONDAY** | **TUESDAY** | **WEDNESDAY** | **THURSDAY** | **FRIDAY** |
| **Lesson Title:**  **Unit:**  **Chapter:**  **Page Number(s):**  (It is suggested that you use your curriculum map.) | **Unit 7**  **Chapters 9:**  **Stoichiometry**  **p. 289-291** | **Unit 7**  **Chapters 9:**  **Stoichiometry**  **p. 289-291** | **Unit 7**  **Chapter 9:**  **Stoichiometry**  **p. 289-291** | **Unit 7**  **Chapter 9:**  **Stoichiometry**  **p. 296-299** | **Unit 7**  **Chapter 9:**  **Stoichiometry**  **p. 296-299** |
| **TN Standard(s):**  Grade level standard (include standard notation and language).  Which State Standard is your lesson addressing? This should also be on your Whiteboard Protocol. | **CHEM1.PS1.3** Perform stoichiometric calculations involving the following relationships: mole-mole; mass- mass; mole-mass; mole-particle; and mass- particle. Show a qualitative understanding of the phenomenon of percent yield, limiting, and excess reagents in a chemical reaction through pictorial and conceptual examples. (states of matter liquid and solid; excluding volume of gasses). | | | | |

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| **Objective (s):**  What specifically should students be able to do at the end of the lesson? The objective is standards-based.  Write the objective in student friendly terms. For example, I can multiply binomials.  This is should also be on your Whiteboard Protocol.  What do you want students to know, understand and be able to do as a result of this lesson?  The objective should be written using the stem…  **I CAN….** | **I Can…**  State the mole ratios from a balanced chemical equation. | | **I Can…**  Perform the sequence of steps to solve mole-to-mole stoichiometric problems. | **I Can…**  Perform the sequence of steps to solve mole-to-mole stoichiometric problems. | **I Can…**  List the sequence of steps used in solving mole-to-mass stoichiometric problems. | | **I Can…**  List the sequence of steps used in solving mass-to-mole stoichiometric problems. |
| **Possible Misconception (s):**  What misconception(s) are you anticipating during this lesson? | Some students use their calculators inefficiently when they have numbers that are multiplied in the denominator of fractions. For example, a student might calculate the problem \_62 × 70 15 × 35 by dividing the product of the numerator by the product of the denominator. This requires that the products be written down. Show students that a number in the numerator is multiplied and a number in the denominator is divided. The problem then becomes a single process of pressing the keys: 62 × 70 divided by 15 divided by 35 = 8.3.  Students often think all reactions go to completion. They will learn in a future chapter that reversible reactions and equilibrium systems limit the masses of products in chemical reactions. Reintroduce the concept of percentage yield at that time. | | | | | | |
| **Literacy-Based DO NOW:**  This literacy-based activity should be ready for students to begin working on upon entering class. Students should have an opportunity to read, write, and/or speak. | Determine the relative masses in grams for each reactant and product in the following balanced equation from Monday (SHOW YOUR WORK!!!):  Fe + O2  🡪 Fe2O3 | List 3 different mole ratios that can be obtained from the following balanced equation:  6 Na2O + P4O10 🡪  4 Na3PO4 | | Consider the following balanced equation:  6 Na2O + P4O10 🡪 4 Na3PO4  How many moles of Na3PO4 will be produced if 9.27 moles of Na2O react completely? (SHOW YOUR WORK!!!) | Get out your Mole-Mole Problems to use on the clicker quiz. | For the following balanced equation:  Al(OH)3 + 3 HCl 🡪  AlCl3 + 3 H2O  a. Determine the mole ratio for Al(OH)3 and HCl  b.Determine the molar mass of Al(OH)3 (SHOW YOUR WORK!!!) | |
| **Agenda for the Day**  Simple outline of lesson segments or activities that is time stamped.  Teacher/class should take 2 minutes or less to review. | * Do Now *(8 minutes)* * Review Learning Objective *(2 minutes)* * I Do *(12 minutes)* * We Do *(12 minutes)* * You Do *(13 minutes)* * Exit Ticket *(5 minutes)* | * Do Now *(8 minutes)* * Review Learning Objective *(2 minutes)* * I Do *(12 minutes)* * We Do *(12 minutes)* * You Do *(13 minutes)* * Exit Ticket *(5 minutes)* | | * Do Now *(8 minutes)* * Review Learning Objective *(2 minutes)* * I Do *(12 minutes)* * We Do *(12 minutes)* * You Do *(13 minutes)* * Exit Ticket *(5 minutes)* | * Do Now *(8 minutes)* * Review Learning Objective *(2 minutes)* * I Do *(12 minutes)* * We Do *(12 minutes)* * You Do *(13 minutes)* * Exit Ticket *(5 minutes)* | * Do Now *(8 minutes)* * Review Learning Objective *(2 minutes)* * I Do *(12 minutes)* * We Do *(12 minutes)* * You Do *(13 minutes)* * Exit Ticket *(5 minutes)* | |
| **Beginning of Lesson**  **I Do**  **Science:** Engage & Explore | **I will model how to determine mole ratios from a balanced chemical equation.** | **I will model how to solve mole-mole conversion problems.** | | **I will provide practice problems to help students convert from moles of a given substance to moles of another substance.** | **I will model how to solve mole-to-mass stoichiometry problems.** | **I will model how to solve mass-to-mole stoichiometry problems.** | |
| **Middle of the lesson**  We Do  **Science:** Explain and Elaborate | **Respond to CFUs embedded in the guided notes to indicate mastery of the concepts covered in class today.** | **Respond to CFUs embedded in the guided notes to indicate mastery of the concepts covered in class today.** | | **Work together to solve Mole-Mole Conversion Problems.** | **Respond to CFUs embedded in the guided notes to indicate mastery of the concepts covered in class today.** | **Respond to CFUs embedded in the guided notes to indicate mastery of the concepts covered in class today.** | |
| **End of the lesson**  You Do  **Science:** Evaluate | **Respond to CFUs embedded in the guided notes to indicate mastery of the concepts covered in class today.**  **Ask any questions I have concerning determining a mole ratio from a balanced chemical equation.** | **Respond to CFUs embedded in the guided notes to indicate mastery of the concepts covered in class today.**  **Ask any questions I have concerning converting between moles of a given substance to moles of another substance.** | | **Complete the Mole-Mole Problems assignment.** | **Respond to CFUs embedded in the guided notes to indicate mastery of the concepts covered in class today.**  **Ask any questions I have concerning solving mole-to-mass stoichiometry problems.** | **Respond to CFUs embedded in the guided notes to indicate mastery of the concepts covered in class today.**  **Ask any questions I have concerning solving mass-to-mole stoichiometry problems.** | |
| **(05 MINUTES MAX)**  **Literacy Based closing activity:**  Engage students in reading and writing tasks that assess their understanding of the lesson. Students are drawn back to the objective for the day. | Complete literacy-based Exit Ticket question on paper or in Microsoft Forums. Will be based on what was discussed in lesson for the day. | Complete literacy-based Exit Ticket question on paper or in Microsoft Forums. Will be based on what was discussed in lesson for the day. | | Complete literacy-based Exit Ticket question on paper or in Microsoft Forums. Will be based on what was discussed in lesson for the day. | Complete literacy-based Exit Ticket question on paper or in Microsoft Forums. Will be based on what was discussed in lesson for the day. | Complete literacy-based Exit Ticket question on paper or in Microsoft Forums. Will be based on what was discussed in lesson for the day. | |
| **SPED Modification (s):**  What modifications are being made to accommodate the students receiving special services? | Extended time on assignments; ability to correct assignments; reduced number of problems  Planned/preferential seating  Allow breaks during class  Extended time for testing; reduced choices on multiple choice tests  Repeating directions verbatim | | | | | | |
| **ESL Modification (s):**  What modifications are being made to accommodate the students receiving special services? | Small group instruction  Read aloud for assessments  Interactive reader for computer assignments  Extended time on assignments and tests  Opportunity to redo assignments and correct tests based on teacher feedback  Bilingual support provided by translated copies, peers, and dictionaries | | | | | | |
| Formative assessment of responses to the CFUs and Exit Ticket. | Formative assessment of responses to the CFUs and Exit Ticket. | | Formative assessment of responses to the CFUs and Exit Ticket. | Formative assessment of the answers to the Mole-Mole Problems assignment. | Formative assessment of the answers to the CFUs and Exit Ticket. | | Formative assessment of responses to the CFUs and Exit Ticket. |
| **Corrective Activity (s):**  What will I do if the student doesn’t understand the lesson? | -Weekly tutoring sessions  -Peer tutoring partners.  -Opportunity for corrections. | | -Weekly tutoring sessions  -Peer tutoring partners.  -Opportunity for corrections. | -Weekly tutoring sessions  -Peer tutoring partners.  -Opportunity for corrections. | -Weekly tutoring sessions  -Peer tutoring partners.  -Opportunity for corrections. | | -Weekly tutoring sessions  -Peer tutoring partners.  -Opportunity for test corrections. |
| **Extension/Enrichment Activity (s):**  What will I do with students who understand quicker than others? | * Have students research how chemists increase the yield of a chemical reaction. One example involves the Haber process used to make ammonia, which is then used to make fertilizers. Point out the importance of fertilizers in growing food crops. To increase the percent yield, the Haber process involves very high temperature and pressure. | | | | | | |
| **Technology Integration:**  How will the students use technology to help them master the objective. | * Use district-issued electronic device to complete online assignments, formative assessments (exit tickets), and summative assessments. | | | | | | |

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| **IN THE FOLLOWING PAGES:**  **ONLY COMPLETE SECTION(S) BELOW IF YOUR SUBJECT IS IDENTIFIED/LISTED** | |
| **ALL SCIENCE (S):**  What is your **resource plan for each of the 5 Es** of inquiry-based science instruction?   1. Engage 2. Explore 3. Explain 4. Elaborate 5. Evaluate | **Engage**   1. Classroom Catalyst, TE p. 289 2. Demonstration: Mass Relationships in Chemical 3. Reactions, TE p. 290 4. Classroom Catalyst, TE p. 294 5. Demonstration: Limiting Reactant, TE p. 302   **Explore**   1. Quick Lab: Limiting Reactants in a Recipe, p. 306 2. Lab: Stoichiometric and Gravimetric Analysis 3. (Forensics) 4. Lab: Stoichiometry (Open Inquiry) 5. Lab: Gravimetric Analysis-Hard-Water Testing   **Explain**   1. Classroom Practice: Stoichiometric Calculations Using Mole Ratios, pp. 295, 297, 299, 301 2. Classroom Practice: Limiting Reactant, pp. 303, 305 3. Classroom Practice: Percentage Yield, p. 308   **Elaborate**   1. Alternative Assessment, TE p. 300   **Evaluate**   1. 9.1 Section Formative Assessment, p. 291 2. 9.2 Section Formative Assessment, p. 301   3. 9.3 Section Formative Assessment, p. 308 |
| **ALL SCIENCE (S):**  ***(Multiple opportunities to engage in science, Makes since of science content)***  What is yourplan to incorporate technology while incorporating the 5E instructional model? | **SUGGESTED OPPORTUNITIES FOR TECHNOLOGY**  1. PhET Simulations  2. Microsoft Forms  3. Virtual Lab |