



Course: Honors Chemistry

We hope that you, your families and loved ones are well! During the COVID-19 pandemic school closure, we will be doing our best to provide you engaging activities that will enrich your understanding of Chemistry. During term 4, you will primarily be exploring matter and its interactions, including types of chemical reactions, stoichiometry, energy transfer and properties of solutions.

Goal for this week

Learning Objectives:

Students will be able to ...

1. determine the mass of a substance produced in a chemical reaction.
2. determine which reactants are limiting in a chemical reaction.
3. calculate the yield of products created a chemical reaction.

(2016 MA STE Standard: HS-PS1-7)

Literacy Objectives:

1. Reading: to understand a concept and construct meaning
2. Writing: to take notes
3. Writing: to generate a response to what one has read, viewed, or heard
4. Reasoning: to identify a pattern, explain a pattern, and/or make a prediction based on a pattern

(<https://www.bpsma.org/schools/brockton-high-school/about-us/mission-literacy-charts>)

Lesson:

Chemistry Café: Stoichiometry

- See the page(s) below for a complete description of what to do and the resources you will need.
- ***Your science teacher will be in contact to clarify expectations (like when and how to submit your work for credit) for your class.***

WHY THIS MATTERS

Understanding stoichiometry is essential in chemistry because it allow you to determine how much starting material you need to generate sufficient product in a reaction. Can you image the consequences of not [putting the right amount of fuel in a NASA rocket](#)? Definitely something you want to get right with millions of dollars of equipment and lives on the line!

Additional Support

Email:

- Please reach out to your science teacher with specific questions about the lesson.

Office Hours:

- Here is a list of the [science teachers' office hours](#). Please email your teacher to set up meeting times.

Other questions:

- Science Department Head
Dr. David Mangus
davidmangus@bpsma.org



Chemistry Café

Topic: Stoichiometry

Pre-Work Assignments to do:

Click on the link to view the resource ...

1. Read through the [PowerPoint](#), paying close attention to the examples.
2. Have access to the [Periodic Table](#) (Can download apps onto smart phone: Periodic Table or Elementium) and know how to look up [densities of elements](#) and [compounds](#).
3. Complete the [Stoichiometry Introduction worksheet](#).
4. Watch the [Limiting Reagent \(reactant\) video](#)
5. Complete the simple [Limiting Reactant Worksheet](#).
6. Watch the [How to Calculate Percent Yield and Theoretical Yield](#) video
7. Choose 3 assignments from the café below to complete:
You should select 1 appetizer, 1 main course, and 1 dessert

Appetizer

[Stoichiometry Mass to Mass worksheet](#)

[Balancing Equations, Stoichiometry, and Classification of Reactions Simulation](#)

[Worksheet: Mass/Mass Problems](#)

Main Course

[Limiting Reactant Worksheet](#)

[PHET stoichiometry](#)

[Limiting Reactant and Theoretical Yield Worksheet](#)

Dessert

[Limiting Reactant and Percent Yield Worksheet](#)

[Limiting Reactant and Percent Yield Worksheet 2](#)

[Limiting Reactant and Percent Yield Worksheet 3.](#)

Recommended Pacing

Monday: Pre-work assignments, **Tuesday:** Finish pre-work assignments, **Wednesday:** Complete an appetizer, **Thursday:** Complete a main course, **Friday:** Complete a dessert