SCH3U STOICHIOMETRY UNIT

NOTE: Links in italics may not currently work. Will go "LIVE" as the unit progresses.
Please note that the outline starts as a duplicate of a previous semester to serve as an overview but is likely to change including assignments.

This is a live document. It will be adjusted as we go.

Assessments	**Information** Complete quizzes as you complete the learning related to each topic,
Quiz 1 topics: *The Mole & Formulas & ~~% Composition~~ (no % comp for this quiz this semester)*	In Class Date: *Apr 9* ~25 mins in class Correct AND hand in Quiz with answers will be posted on Classroom at the end of the quiz day.
Quiz 2 topics: *Stoichiometry*	In Class Date: *Apr 16* ~25 mins in class Correct AND hand in Quiz with answers will be posted on Classroom at the end of the quiz day.
	This is larger learning portfolio item (will take more time & worth larger value to portfolio mark)
UNIT TEST	*DATE:* *Apr 30* . ● Use the topics in below plan to create your own test topic list- SUGGESTED: Do a mindmap of the unit topics to solidify connections and understanding. ● Multiple Choice **strategies** ○ 4C students -> you will be able to use this copy of the Stoichiometry Map (handed out with the test) outline on the test and can put the basic mole calculation formulas on it. ○ Good 4C Stoichiometry Review (answers at end of document) ● 3U Stoichiometry Review ● SCH3U/4C Exam Practice Quizzes & Tools - See slides stoichiometry Unit. Please ADD any helpful resources you find. ● Use any practice options provided with each learning topic (redo prior quizzes & activities) ● Try to create your own review topics list before referring to this:

Learning Topics and Pacing Guide

Stoichiometry Unit Textbook Solutions

Keeping Track! You can copy this Table of Contents to link all digital materials & track all topics. Optional but recommended.

KEEPING UP	LEARNING TOPIC COLLECTIONS	Complete Topics in collection **from Left to Right in the row,** then proceed to the next collection, unless otherwise instructed. Each topic should be completed in ONE class unless otherwise indicated. Boxes Filled in **Blue are Level 4** & can be skipped if you are behind the pace of the course (must complete Level 4 material if you are aiming for an above 85% in the course). It WILL appear on assessments.			
Apr 3: Start of Stoich & the mole *(Recipe activity may move to later in unit)* **Apr 4:** Mole (cont'd) & Practice [redacted] . **Apr 7:** Work period on solving mole and molar mass problems. **Apr 8:** Percent composition & Stoich intro sheet **** QUIZ after completion of this row** ○ Reminder to add regularly to your learning portfolio AND use Retrieval practice routinely.	**THE MOLE** Math Skills Review - **Useful site for variety of skills. Use as needed**	**TOPIC: Start of Stoichiometry UNIT** SCH3U Terms & Translations ● Recipe Activity Teacher only: [redacted]	**TOPIC: The Mole Introduction & Molar Mass (2 days)** LEARN: → Learning Guide: Measuring with the Mole **Practice:** NOTE: For all the practice sheets in this unit the goal is to do **as many as needed** for you. -> Moles & Molecules Practice (Answers built in) ** Last page is the Sheet handed out in class and the Sig digits in answers are correct in this digital one -> Mole & Mass Worksheet → Answers -> Mole Worksheet 2 - Answers at the bottom. Try at least #1,3 &4 [No handout] -> Digital practice - select number and type of problems you want. -> **THIS VIDEO for help using scientific notation** in your calculator as needed. (FYI he's just a little sarcastic…) If your calculator does not work the way any of the video ones, try your instruction manual or google scientific notation + your type of calculator. Optional help/extensions: Standard slides on this topic (most in learning guide): → **SCH3U Mole, Particle and Molar mass** → **Introduction to Molar Mass**	**TOPIC : Percent Composition** LEARN: -> **Percent Composition Lab** **->** Learning Guide: Percentage Composition **Practice:** -> Stoichiometry Intro WorkSheet (use digitally, no handout) -> Percent Composition Lab questions on Classroom. This is NOT a lab report. -> Balancing & Mole Quia on Classroom -> **% Composition Worksheet** with Youtube link to solutions -> Worksheet :Empirical and Molecular Formula problems Optional help/extensions: -> Determining Empirical and Molecular Formulas Note (print) -> The Process in detail(after lesson only): ***How to Calculate Mass Percent***	
Apr 9: **Quiz 1** & % composition Lab **Apr 10:** Do Stoichiometry Mole to Mole **Apr 14:** Mass to Mass **Apr 15:** Full Map and	**STOICHIOMETRY**	**TOPIC: Stoichiometry Intro & Mole to mole only** LEARN: -> **Read** (print): Stoichiometry Intro Note -> **Video:** Mole to Mole with Volcano & water example (13 mins) -> Mole to Mole Student Guide - print or draw it for notes.	**TOPIC: Stoichiometry Mass to Mass** LEARN: **-> Print or draw** at least one to use at home: Mass to Mass Student guide Set **-> Watch Video**: Mass to Mass Problems (11 mins) -> Optional Video Example 2: Mass to mass 2: Water Example (8:50mins) **Practice:** -> Please try the problems using the Guides for at	**TOPIC: Full map** LEARN: -> For your use: Full Stoichiometry Guides - 3 basic: ○ In class, we will have maps in plastic sleeves to use but won't have individual take-home copies. ● Watch Video: Full stoich map overview. (5:30mins) ● {Optional} Watch Video: Water Mass to Particles Example (6:30 mins)	●

practice time. {Quiz NEXT period} * Marshmallow note		**Practice:** -> Mole to mole Problems - Answers Please try the problems **using the Guides** for at least 3-4 problems as indicated in the video. Then try without the guides. -> Molar Ratios Sheet - Answers - Do two charts min. -> Digital practice - select number and type of problems you want. Optional help/extensions: -> Molar ratios for three reactions worked through. It doesn't use the map but you should be able to spot the same sequence of steps.	least 3-4 problems as indicated in the video. Complete at least 2 problems where you write out the steps in words before completing the steps. This will help you to remember the steps correctly and in order. -> Mass to mass Problems - Answers -> Mass to mass problems - full solutions These solutions do NOT use the format of the Maps but DO follow exactly the same steps. You can complete problems on assessments as shown in the solutions (ie without the map) once you are confident.	**Practice:** Complete using the Stoichiometry Map Guides to start. Please practice writing the steps in words AND drawing your route on the map until you are fully confident in visualizing the solutions method. Complete enough of these problems to become confident you can reach the correct solution! • Problems with Particles (digital) - Answers • Stoich Problems 2 → Solutions (2) • Stoich Problems 3 → Solutions • Problems with Particles: Stoichiometry Question Sheet (use digitally) • Digital practice - select number and type of problems you want. • **HMWK ASSIGNED:** Submit a **picture of ONE stoich problem** involving mass and/or particles fully completed on the Full Stoichiometry Guide Optional help/extensions: SUGGESTED extra help and practice when ready: • For further examples including Hints & Tips Watch Video: Full Map Multiple Examples with Hints & Tips (24 mins) • OR if you are feeling confident just Read: Stoichiometry Hints & Tips • Full Stoich Guides_Additional - three more maps with varying levels of support • Online converter to check your calculator work with the mole • BEFORE NEXT CLASS: ○ Bring in gelatin-free marshmallows if you don't consume gluten and want a s'more • More examples with the Map	

Apr 16: Quiz 2 & Limiting Reagents (read lab) ** Unit Test SOON **Apr 17:** Limiting Reagents Complete & practice time **Apr 22:** Limiting Lab Part 1 & Practice s) **Apr 23:** Complete Limiting lab final data and analysis ** ***Intro Culminating*** **Apr 24:** Wrap up limiting & Yield **Apr 25: Culminating Work Period** **Apr 28**: Start Gases unit & Portfolio time See our Gases unit on Classroom and complete DAY 1 videos & notes. Hmwk: Start Solution unit with **Are you ready (for Solutions unit) p262-263 # 1-15** **Apr 29:** Practice & Unit Review (Cyclone game?) [redacted] **Apr 30:** Stoich Unit Test [redacted]	**LIMITING REACTANTS (reagents)** ** QUIZ towards end of this Learning Collection **Test is approaching	**TOPIC : Learn Limiting Reagents** LEARN: -> S'mores Activity -> In small groups -> Limiting Reagent Slides Note that audio does not need to be played if the text explanations make sense to you. **Practice:** -> Read Limiting Lab Revised to be prepared for a more complex lab -> Today practice some of the options below and see if you can predict the limiting in the lab. -> Limiting Practice Work: THIS WILL BE SPREAD OUT OVER the next class too. Try 1-3 today if possible. -> Limiting reagents 1 Practice (only Mole to Mole) -> Limiting 1 Answers -> Limiting reagents 2 Practice (Mass to Mass) -> Limiting reagents2 Answers Optional help/extensions: -> Limiting Reagents Video -> {Optional} Use this Limiting Reagent Simulator to check your understanding.	**TOPIC : Limiting Lab** • Filtration Instructions Video (From 4 min mark) • Complete Part 1 of Limiting Lab Revised • Work on Limiting Reaction Slides as time allows	**TOPIC: Yield** LEARN: **Video:** Theoretical Percent Yields **(3U & 4C)** **Practice:** • Yield Practice problems - Yield Answers Optional help/extensions: Percent Yield and Stoichiometry Slides	**TOPIC: Stoichiometry Stumpers (2 classes NOT Spring 2025 semester)** • Stoichiometry Stumpers Slides instructions • Stumpers Rubric F17
TEST! See Table at the					

top for Review Material and Test Date.					
		For the teacher only! {This will take ~ 2 classes} **Copy paste this template as needed:** **TOPIC:** This lesson covers concepts in: *Nearpod* *Period A*, *Period B*, *Period C* [Spring 22 links] Reference slides for topic **ASSIGNED**: Include in your portfolio. Level 4: Include a (not fancy) mindmap NO assigned portfolio item. Optional/extensions:	**TOPIC:** LEARN: -> -> **Practice:** -> Optional help/extensions: *Nearpod* *Period A*, *Period B*, *Period C* [Spring 22 links] Reference slides for topic **ASSIGNED**: Include in your portfolio.		