Grade 10 Review & Nomenclature

Please Proceed through the diagnostics, learning materials and assessments AS NEEDED to recall (or perhaps learn) topics from Grade 10 chemistry. If you take the diagnostic and feel confident in your understanding, please proceed to the practice material as you need to be skilled in grade 10 basics and nomenclature, so practice is important!!

Recall: Nomenclature is the fancy word for naming chemicals. For example: sodium chloride

Quizzes & due dates (when you should have tried quiz at least once):

Topic	Diagnostic	Primary Learning Material - ONLY if you feel you need it	Practice	Assess your understanding
Learn Element #1-60 Names Symbols The Element Song You do NOT need to memorize anything else (atomic mass, number etc).	See how many you can remember from Grade 10 then slowly work starting with #1-30, then add up to 40 then try for 60! You will always have a periodic table but not knowing the names & symbols will make tests harder/longer.	Use the Periodic Table You will receive one in class, there is one in the textbook, this digital one on our Classroom and this one: Interactive Periodic Table	These are OPTIONAL resources to help you learn the elements Quia Elements 1-40 Flashcards you can print & use: Symbol only Name only Games A number are found on this slide : Gd 10 Review Element practice game	- Slowly build up the elements you know the name & symbol of, attempting to be familiar with #1-60. Use this quiz on the first 40 elements

Math Skills Review	Complete - **Necessary Math Skills -> Answers** Try to attempt it honestly to assess your skill level. *The Skills WS is a heads up. If it is challenging you need to work on improving your math skills in order to ensure you are successful in chemistry. We do a lot of equation rearranging!*	Math Skills for Chemistry Students.pdf - WALKS THROUGH EXAMPLES, Very good to go over!!! All Questions have answers on following pages VIdeos: Isolating Variables (Starter) Isolating Variables in Equation(more challenging)	Solving for any variable... Rearranging Equations - Practice Problems Manipulate formulas (practice) | Modeling | Khan Academy	
Scientific Notation & Unit Conversion	Can you easily convert from 10000 to 1x 10^4? How about 2.4x 10^{-3} to 0.0024?	->Scientific Notation & Calculator How to -> Khan Academy	Quizlet practice (I haven't proofread, let me know if you think there are any errors) SI Conversions Quiz : ChemQuiz.net	
Structure of an Atom See above if you missed the "How to Nearpod" link.	Build An Atom - Let you review all about an atom. If you are confident after a few and know how to calculate neutrons and place electrons, you are done reviewing. Otherwise use the hints and practice at this site or the Dewitt Video etc.	Options as needed for review: 1. Basic Atomic Structure Video (Dewitt) OR Khan 2. Complete more on the Build An Atom site	• The Atom (Quizzizz)	
Periodic Table	- What are rows and columns of the periodic table called? - Where would you find metals? -Where would you find non-metals?	The periodic table - classification of elements | Chemistry | Khan Academy - Covers the different periods & groups and their properties	Periodic table review The Periodic Table (quia quiz - NOT	none

	-What is similar about elements in the same column? -Can you name the Group 1, 2, 7 and 8 elements?	**Again, If you know all about it you can skip this learning.** **Standard Atomic Notation for Atoms**	assessed)	
Ions	Can you answer: 1. What is an ion? 2. Which subatomic particle is lost or gained to form atoms? 3. Define valence electron and Cation vs Anion? 4. How do you determine the charge on an ion?	Video On Ions (7minutes)	This will occur below as you practice ionic compounds. Can you answer the diagnostic questions now?	none
Bohr-Rutherford Diagrams **This is for review from gd 10. It will be covered in more detail in class as well.	Can you answer these? 1. Where do the protons and neutrons go? 2. How many electrons are in the first shell? The second and third? 3. Where are valence electrons located?	How to Draw Bohr-Rutherford Diagrams (4 minute video)	Suggested: Draw the diagrams for the first 18 elements (atomic numbers 1-18). If you are fully confident, you can do as few or as many as you like.	**HAND Draw (copied images don't show understanding)** and submit at least two bohr rutherfords diagrams on google classroom "Bohr Rutherford Check-In". The elements can NOT be from the same PERIOD (Row) on the periodic table
Lewis (AKA Electron Dot) Diagrams for ionic & Covalent Bonding	What is the difference between a BOhr-R diagram an a lewis (or electron dot)	Lewis Diagrams and Ionic Bonding Lewis diagrams and Covalent Bonding Feel free to use your textbook or videos to review & we'll have some class time as needed.	Complete Ionic and Covalent Bonding Diagrams in your own notes (not handouts)	

Ionic compounds and nomenclature		Ionic Compound Nomenclature ALL below covers the SAME info. Choose your preferred method (nearpod, video, note) Ionic & Covalent Bonding Learning Other video options - **Writing Ionic compounds (start at 2:30)** **-- Writing Formulas for Polyatomic Ions** Interactives . The Periodic Table . Groups . Ionic Bonding Slides: *Ionic* ***Polyatomics*** OR NOTES: Forming & Naming ionic compounds (note) Polyatomic Note & questions (note)	Questions matching Lewis Diagrams & ionic bonding in textbook: Naming Ionic and Molecular Compounds Game p. 71 #1-5, p. 73 #8-13,p. 93 #6-10 [as needed, review from Gd10] Mixed Ionic & Covalent Nomenclature Sheet 1& 2 Polyatomic practice: Nomenclature Sheet 3 & 4 - attempt at least all of sheet 3. **For answers**, compare the matched sheets for all these style of nomenclature practice :) Compare sheet 1 to sheet 2. Compare sheet 3 to sheet 4.	Log in with your provided username and password: Quia PRACTICE Quiz: Click Here to take a Quia Quiz. Complete this Polyatomic Naming Quiz as many times as you like but include your FIRST mark on Learning Portfolio and what you learned from first/additional attempts. Click done on assignment when it's completed. See Classroom post for details & due dates.
Transition metal naming (Multivalent)	What special kinds of numbers can be found after the name of metals with more than one possible ionic charge (Eg Iron can form 2+ OR 3+ ions)? Try to write an example of iron combined with oxygen with one of these ions.	**Naming Compounds with Transition Metals Video (multivalent)** Ionic Compounds with Multivalent Metals - Slides		

Methods for deciding the name	Try to list what you need or know (the questions you should ask) in order to name a compound. Eg. Does it have a metal?	These are two ways to think through/approach naming. Whichever works for you! *The Questions for Naming Any Compound* (slides 1-7) Nomenclature Flow chart		
Naming Covalent Molecules		Slides: *Covalent* Covalent Bonding Covalent Bonding Simulation For Reference: Covalent Bonding Note	Prefixes Flashcards See above practice sheets as they have covalent naming mixed in.	
Properties of Ionic and Covalent Molecules	Attempt the properties comparison sheet in practice section. What do you remember from Grade 10?		-> Good to have in your notes: Complete Properties Comparison Sheet - *Answers* Added practice: -> Quizzizz: Properties & Bonding of Compounds(Link empires so let me know if it doesn't work, F21)	
Balancing Chemical Equations	Adding these shortly! This will be a review test topic. Can you balance: $Al + HCl \rightarrow AlCl_3 + H_2$	If this isn't easy for you: Introduction to Balancing Chemical Equations	Work along pausing to try yourself before Tyler works through the answer: Balancing Chemical Equations Practice Problems	

Types of Chemical Reactions	Adding these shortly! This will be a review test topic. Do you know the difference between a synthesis and decomposition reaction? How about single compared to double displacement?	Watch: Types of Chemical Reactions	Identifying types of reactions (practice) | Khan Academy Types of Chemical Reactions Flashcards | Quizlet	
All the above should be grade 10 review. If it isn't, that's ok as there is typically 2 lessons dedicated to reviewing this material. Just catch up and ask questions as needed. PRACTICE is the KEY. LOTS OF PRACTICE! BELOW THIS is some grade 11 additions to nomenclature				
Acids & Hydrates	This is a new topic for Grade 11 so you won't know all the details but you have seen some acids named. Try to list a few and consider how they are names	• Acids & Hydrates - Use this self-guided presentation.	Acids & Hydrates practice: Sheets 5&6 , attempt at least all of sheet 5. Again compare sheets for answers. Quizlet Flashcards Complete this Acids & Hydrates Practice Quiz as many times as you like and then head to Classroom to complete it ONE TIME for MARKS on the POlyatomic Quiz assignment. Click done on assignment when its completed. See Classroom post for details & due dates.	Complete Quia Acids quiz on classroom. Record your first result & reflections in Learning Portfolio
