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User name: **tsshchem**

Password: **student2021**

**Course Description:** This course is designed to acquaint students with the processes and properties of matter and change. Students will become familiar with the basic concepts of chemistry and will utilize the scientific method during discovery.

**The Salisbury School Honor Code:** All work bearing your name implies that you did not receive unauthorized assistance. This includes and is not limited to: exams, quizzes, lab reports, lab notebooks, projects, and some homework activities. There will be some class, group and workshop activities that are excluded from this rule.

**CLASS RULES:**

- 1) Have all materials\* every day.
- 2) You are responsible for all items posted on the website.
- 3) Clean your area before leaving the room.
- 4) The NOs:
  - a. NO removing of face coverings
  - b. NO food or beverages consumed in the room
  - c. NO shouting, or calling across the room.
  - d. NO phones during class (*unless used for taking pictures for online submissions*).

## MATERIALS\* NEEDED EVERYDAY

- 1) Unlined Composition notebook (free)
- 2) Pencil or mechanical pencil (**no pens! -2pts on assignments**)
- 3) Calculator TI -84, TI-83
- 4) Laptop & Charger
- 5) Glue sticks
- 6) Ruler

***THERE WILL BE NO  
SHARING OF  
SUPPLIES!***

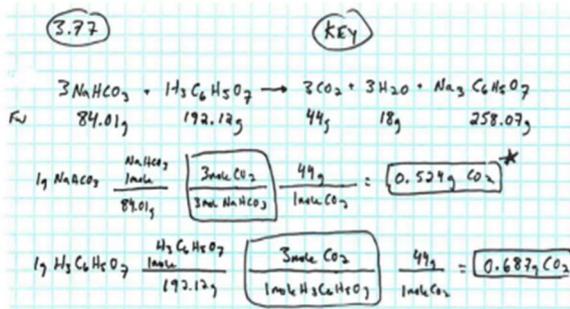
## **Virtual Submissions for Classwork, Homework, Assessments, Test, Quizzes, Exams and Lab Reports**

In order to reduce the risk of COVID-19 spreading between students and faculty, a virtual submission will be sometimes used this year. Assignments and due dates will be posted on the school website, and some assignments and assessments will be submitted via Google Classroom.

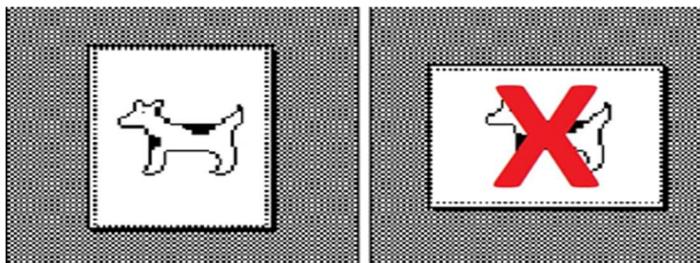
## Classwork & Homework:

- 1) Assignments and due dates will be posted on the school website.
- 2) A corresponding repository folder will be created in Google Classroom for the assignment.
- 3) Students will complete their assignments in a sewn bound unlined composition notebook in pencil with the following information in the heading
  - a) The assignment **Number** and **Name**
  - b) Your **First Name**
  - c) The **Date**
- 4) When completing any math operations, you must
  - a) **Write** the formula
  - b) Show how you **solve** the problem
    - a) All work/steps are to be done in a **vertical fashion**, rather than horizontal
    - c) **Box** your final answer and include **proper units**
    - d) Example Shown:

### Chemistry Example:



- 5) Completed homework will be photographed in **portrait layout** (see image) and inserted into a **Google Document**. It will then be uploaded to the correct Google Classroom folder.



- 6) Homework assignments **may** be counted for completion **or** accuracy depending on the assignment and the teacher.
- 7) If an assignment is missing, the following actions will be taken:
- Week 1:** a 50% reduction in points for freshman and sophomores (no late submissions for juniors or seniors).
  - Week 2:** a zero in the gradebook, unless a viable excuse is documented with the teacher.

### **Test Quizzes and Assessments:**

Quizzes will be handwritten and in class (unless given via Google Classroom for an assessment of the material). Quizzes are generally given everyday. Tests and Exams will be hand written and in class (unless given via Google Classroom).

#### ***If given via Google Classroom:***

- 1) A timed quiz will be posted in google classroom.
- 2) The format of the questions can be multiple choice or handwritten free response.
- 3) When doing multiple choice questions, the quiz will be automatically graded yet not released until I review the results of the quiz.
- 4) A handwritten free response will require you composing your answer in your composition journal, photographing it, and submitting via a google document (as explained in the Classwork and Homework section).

**Lab Reports;** Scientific writing is very different than writing in other disciplines. We will actually violate “the rules” for concise sentence writing by making the object the subject, using past tense and very limited use of pronouns. This shift in writing may be difficult for some, however I make it a priority to demystify the situation and help you become a proficient science writer. So, periodically there will be individual or group lab reports required from you. I will give you specific guidelines for how these should be constructed and I will periodically workshop with you on how to improve your scientific

writing. You may be required to present your findings to the class during the year. These exercises will be instrumental in increasing your scientific communication skills.

**Mini Lab reports:** On many activities, you will write mini lab reports. An outline will be provided for you on the Google Classroom. All mini lab reports *must be handwritten in your journal*, photographed and submitted through the Google classroom.

**Online:**

This year I'm going to try my best to provide instructional videos online at [drduick.com](http://drduick.com) (click on The Salisbury School logo). These videos will be very helpful if you (or me for that matter) need to be out for any reason during the year. They will be numbered and used as a reference point for homework/classwork assignments. However, they should not be used for completing tests and quizzes.

**Pivot Interactives:**

There will be online lab simulations with a multitude of questions associated with the activities. A seat in the classroom account will be given to you for completing the lab assignments. Although the classwork/homework will be posted on the school portal and started in class with me, it will be the responsibility of the student to perform the labs and answer the questions independently. <https://www.pivotinteractives.com/>

**Exams**

There will be an exam at the end of the year (15%). The exam will be comprehensive on all material covered during the year.

Category	Semester 1	Semester 2
Classwork/Homework	35%	30%
Tests/Quizzes	65%	55%
Exam	-	15%

**CONTENT COVERED:**

**Chapter 1: Introduction to Chemistry**

- Scientific Method
- Classification of Matter
- Separation Science Example Distillation and chromatography
- Physical and Chemical Properties
- Temperature and Density- Demos
- Meet the Elements
- Math Review, Significant Figures & Statistical Techniques
- Dimensional Analysis and Proportions
- Units of Measurement
- Conversion of units
- Dimensional Analysis

- Uncertainty in Measurements and Significant Figures
- Length and Volume
- Mass and Weight
- Density and Specific Gravity
- Temperature and its Measurement

### **Chapter 2: Atoms Molecules Ions**

- Atomic theory
- Atomic structure
- Atomic weight
- Periodic table
- Molecules molecular compounds
- Ions and ionic compounds
- Naming inorganic compounds
- Organic compounds

### **Chapter 3: Stoichiometry**

- Chemical equations
- Chemical reactivity
- Formula weights
- Avogadro's number and the mole
- Empirical analyses
- Balanced equations – quantitative
- Limiting reactants

### **Chapter 4: Aqueous reactions**

- Law of Constant Composition and Calculations based on Law
- Using Moles to find a Quantity
- Stoichiometry
- Limiting Reagents
- Using Density
- Solution Terms
- Stoichiometry – Solutions
- Balancing Chemical Equations
- Types of Chemical Equations
- Types of Chemical Reactions
- Predicting based on Stability
- Predicting based on Type
- Chemical reactivity and products of chemical reactions
- Reaction types –Organic Functional Group Reactions, Acid-basereactions; concepts of Arrhenius, Brönsted-Lowry, and Lewis; coordination complexes; amphoterism,
- Precipitation reactions, Oxidation-reduction reactions, Oxidation number, The role of the electron in oxidation-reduction

### **Chapter 5: Thermochemistry-**

- Introduction to thermodynamics
- Conservation of energy
- State Functions
- Potential Energy
- Kinetic Energy
- Calorimetry
- Heat of Fusion
- Heat of Vaporization
- Specific Heat
- Heat of Dilution
- Heat of Solution
- Hess's Law- direct and indirect
- Bond Dissociation Energies
- Gibbs Free Energy Equation

### **Chapter 6: Electronic Structure of Atoms-**

- Wave light energy
- Quantized energy photon
- Line spectrum
- Wave behavior matter
- Atomic orbitals --p-d-f
- many electron atoms
- electron configurations
- electron configuration periodic table

# HCCHEM:

**Dr. Duick**

5pts Read this syllabus, and have this sheet signed and returned before the next class meeting time:

**I have read the syllabus and understand the criteria by which I will be evaluated:**

Student Signature: \_\_\_\_\_

Student Name (printed): \_\_\_\_\_

Student phone number, for texting homework updates

Parent Signature: \_\_\_\_\_

Parent Name (printed): \_\_\_\_\_

Parent Email

*Please do not text or call me after 8pm (I will do the same).*