

AP CHEMISTRY SUMMER 2018 PACKET

It is the responsibility of the student to have completed the summer packet. **Timelines and Due dates are on assignments.**

Topics to be covered:

Chemistry – Matter and Change, Glencoe McGraw-Hill

Each chapter is to be outlined or summarized in your own words (handwritten, NOT word-processed and uploaded to google doc folder that is shared with you via a photo or pdf upload

DUE DATE:

- Energy and Chemical Reactions (Ch 16.3-16.5) July 1
 - Reaction Rates* (Ch. 17) July 8
 - Chemical Equilibrium* (Ch. 18) July 15
 - Acids and Bases* (Ch. 19) July 22
 - Redox Reactions* (Ch. 20) July 29
 - Electrochemistry* (Ch. 21) August 5
- * New material not covered in-depth in Honors Chemistry

Chemistry – A Molecular Approach Nivaldo J. Tro with Mastering Chemistry and eText

Each chapter from Tro must have a Q-Notes completed, using higher order questions of analysis, synthesis, or evaluation. (both attached to packet)

- Matter, Measurement, and Problem Solving (Ch. 1)
- Atoms and Elements (Ch. 2)
- Molecules, Compounds, and Chemical Equations (Ch. 3)
- Solubility Rules ; Polyatomic Ions; Strong Acids/Bases

A test covering the first three chapters of the AP chemistry text, **Chemistry – A Molecular Approach** will be administered **Tuesday, September 4, 2018.**

Your submission of answers for problems will be done through *Mastering Chemistry*. *The access information will be emailed to you by July 1. Assignments are designed to reinforce the Information from Ch 1-3 (a Review from Honors Chemistry). Time expectations is 8 hours for all the work.*

Remember the purpose of the summer work is to build a foundation of topics that we will not review but you must work from during the year and to get background information on those topics not covered in previous chemistry courses (Honors Chemistry) which will be the application format for the AP Chemistry Exam.

Have a nice summer –

Dr. Katherine Nuzzo & Paul Testa

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Chemistry – Matter and Change, Glencoe McGraw-Hill

DUE DATES are in: Every Week—Starting July 1

Chapter 16 – Energy and Chemical Change

Problems: 82, 85, 87, 88, 90

Chapter 17 - Reaction Rates

Problems: 62, 64, 65, 69, 73

Chapter 18 - Chemical Equilibrium

Problems: 52, 55, 57, 59, 63, 65, 67, 69

Chapter 19 - Acids and Bases

Problems: 46, 48, 50, 52, 54, 56, 59, 87, 90, 91, 95

Chapter 20 - Redox Reactions

Problems: 44, 47, 53, 54, 57, 58, 60

Chapter 21 - Electrochemistry

Problems: 28, 32, 45

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Mastering Chemistry Assignments and Due Dates

Join Course: APCHEMNUZZO2018 or APCHEMTESTA2018

You will find 4 Assignments and Due Dates:

- 1) **Introduction to Mastering Chemistry—July 8**
- 2) **Ch 1 Hw and Q-Notes—August 5**
- 3) **Ch 2 Hw and Q-Notes —August 12**
- 4) **Ch 3 Hw and Q-Notes —August 19**

These will allow you to review and locate areas of challenge BEFORE the exam on Tuesday, September 4, 2018.

Post-AP Exam & Research Opportunities

As you are all aware, the AP exam occurs the first part of May and school does not end until the second week of June. This post-exam time has been designated as a time for students to deepen their knowledge on a topic they have found intriguing. **All students** will begin to increase their understanding of chemistry related this summer by reading/researching areas under the umbrella of *Global Climate Change*. **All Proposals will be due September 17, 2018.**

Utilizing this proposal students will prepare and present a 5-minute PowerPoint for our Institutional Review Board (IRB) and Science Review Committee (SRC) beginning **October 2, 2018**. Questions and suggestions will be offered for you to consider for improvement and then students will finalize their proposal. Science competition registrations will begin.

Students will then have the opportunity to choose one of the two pathways as they progress.

Pathway 1: Completed Project before March 1-CSEF

OR

Pathway 2: Completed Project after Thursday, May 9, 2019 (8 AM) AP Chemistry Exam.

Students will have the opportunity to register and compete in the following competitions:

- NY Times Editorial
- CT STEM Fair (formerly Southern Connecticut Engineering and Science Fair)
- Connecticut State Science Fair *
- CT Jr. Science and Humanities Symposium (JSHS) *
- Norwalk Community College Science Fair*
- JBHS Science Symposium/ Palooza (Jr/Sr Passages)*

**Must be a completed project*

All students will have the opportunity to attend and/or meet with Dr. Nuzzo or Mr. Testa by June 18 to gain an understanding of the research process and *How to Write a Scientific Proposal*.

Supporting Opportunities:

Wednesday, June 6 and Thursday, June 7 : 2:20-3:30 PM C210

Topic and Literature Review

Wednesday, June 13 and Thursday, June 14: 2:20-3:30 PM C210

How to Write a Scientific Proposal

Read, Read, Read...How to find your interest (*i.e. topic*)

Types of Questions

I. KNOWLEDGE

remembering
memorizing
recognizing
recalling identification
recalling information
who, what, when, where, how ...?
describe

II. COMPREHENSION

interpreting
translating from one medium to another
describing in one's own words
organization and selection of facts and ideas
retell...

III. APPLICATION

problem solving
applying information to produce some result
use of facts, rules and principles
how is ... an example of ...?
how is ... related to ...?
why is ... significant?

IV. ANALYSIS

subdividing something to show how it is put together
finding the underlying structure of a communication
identifying motives
separation of a whole into component parts
what are the parts or features of ...?
classify ... according to ...
outline/diagram ...
how does ... compare/contrast with ...?
what evidence can you list for ...?

V. SYNTHESIS

creating a unique, original product that may be in verbal form or may be a physical object
combination of ideas to form a new whole
what would you predict/infer from ...?
what ideas can you add to ...?
how would you create/design a new ...?
what might happen if you combined ...?
what solutions would you suggest for ...?

VI. EVALUATION

making value decisions about issues
resolving controversies or differences of opinion
development of opinions, judgements or decisions
do you agree that ...?
what do you think about ...?
what is the most important ...?
place the following in order of priority ...
how would you decide about ...?
what criteria would you use to assess ...?

Q Notes

Name

Date

Topic

Class/Subject

Overview: Q Notes combines two well-known and powerful methods: SQ3R and Cornell Notes. I call it "Q Notes" because you can only write Q-uestions in the left-hand margin; when you prepare for a Q-uiz, the Q-uestions serve as CUES to remind you what you must know. When using these notes to study, fold the **right-edge** of the paper over so that it lines up with the dotted line. You should then only be able to see your questions in the Q-column. Use these to Q-uiz yourself.

Directions: Turn the titles, subheadings, and topic sentences into questions in this column.

Directions: In this area, you write the answers to the questions. Use bullets and dashes to help organize your ideas. Also, use symbols and abbreviations to help you take notes more efficiently.

Down here you should review, retell, or reflect on what you read so far.